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# The London Medical Record

A REVIEW OF THE

*Progress of Medicine, Surgery, Obstetrics,  
and the Allied Sciences.*

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VOLUME VI.

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LONDON  
SMITH, ELDER, & CO., 15 WATERLOO PLACE  
1878



LONDON: PRINTED BY  
T. RICHARDS, 37, GREAT QUEEN STREET, W.C.

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# The London Medical Record.

## TAMASSIA ON THE EFFECT OF CERTAIN POISONS ON THE TEMPERATURE OF THE BODY.

In the medico-legal department of the *Rivista Sperimentale di Freniatria e di Medicina Legale* (Anno III, April—June 1877), Dr. Arrigo Tamassia, Professor of Medical Jurisprudence in the University of Pavia, publishes an account of observations on the effects of certain poisons in raising or lowering the temperature of the animal body. The use of the clinical thermometer in cases of poisoning is comparatively new; but, from the results already obtained, it is probable that, by aiding diagnosis and prognosis in these cases, it will be of great service to the medical practitioner.

At present accurate observations are few in number, and we are therefore the more indebted to the learned professor for this record of his experiments. These have been restricted to three poisons operating in an acute form, namely, arsenic, phosphorus, and strychnia. The experiments were performed on dogs and rabbits, the poisons being administered in solution by the hypodermic method, as being less likely to interfere with the physiological results. He employed a centigrade thermometer divided into tenths of degrees, and tested the temperature by introducing the bulb of the thermometer into the anus of the animal, and leaving it there for a sufficient time.

1. *Arsenic*.—Arsenious acid in solution was injected into the thigh of a dog, and the animal was carefully watched up to the time of death. In the first experiments three grains were thus administered, the anal temperature being at the time 40° c. (104° F.). Symptoms of poisoning appeared in five minutes after the injection, showing a great rapidity of absorption and diffusion by this method of administration. The temperature fell at the rate of the tenth of a degree per minute for the first five minutes. The animal died in thirty-nine minutes, and the thermometer had then fallen to 37.7° c., showing a difference of 2.3° c. (4.34° F.). The *post mortem* temperature was observed to fall steadily at the rate of one tenth of a degree c. for every two minutes.

In a second experiment, also on a dog, the quantity injected was two grains in solution, a dose which had already been proved by Orfila, as a result of absorption through the cellular membrane, to be fatal to this animal. It is needless to go into minute details. Symptoms appeared in eight, and death took place in seventy-five minutes. The temperature fell progressively, until at the time of death a difference was observed of 4.1° c. (7.38° F.). A rabbit was the subject of the third experiment. A grain and a half of arsenious acid dissolved, was injected into the thigh. Symptoms appeared in seven minutes and the animal died in an hour. The anal temperature at the time of injection was 39.4° (103° F.), and at the moment of death it had fallen 3.2° c., or 5.76° F. After death, the thermometer continued to fall at the rate of the tenth of a degree every four minutes.

The appearances in the bodies of the animals were

similar to those usually found in arsenical poisoning. There was nothing so characteristic as to dispense with a chemical analysis in order to determine the cause of death. Rigor mortis manifested itself at about the usual period, earlier in the dogs than in the rabbit, the dogs having suffered from frequent and severe attacks of convulsions. The rigidity of the muscles continued for forty-eight hours. The blood in the heart and large vessels was fluid and dark-coloured.

2. *Phosphorus*.—After referring to Falck's researches on the action of phosphorus on animals, Professor Tamassia gives the result of four experiments made by himself with this substance, three on dogs and one on a rabbit. The phosphorus was dissolved in oil and injected into the rectum. In the three experiments on dogs, the doses were respectively 4.6, 5.3, and 3.8 grains. In two, symptoms of poisoning appeared in fifteen minutes, in the third not until after thirty minutes. Death occurred in the three, in from seven to eight hours, and the thermometer fell nearly equally in all the cases, the maximum fall being 4.7° c. (8.46° F.). The anal temperature in all was about the same, 39.8° c. (about 103° F.). It was observed that from the time of death, the thermometer fell at the rate of one-tenth of a degree c. for every four minutes. In the experiment on the rabbit 2.3 grains of phosphorus dissolved in oil was injected into the rectum and a grain and a half into the mouth. No symptoms appeared for thirty minutes, and the animal died in eight hours and a half. The initial anal temperature was 38.5° c. (about 101° F.), and the thermometer fell at the time of death 7.1° c. (12.78° F.). The *post mortem* temperature fell at the rate of one-tenth of a degree for every eight minutes. Rigor mortis came on at the usual time in these animals, and passed through its usual course. It was observed, however, in accordance with the experiments of Brown-Séquard, that it supervened more rapidly in those animals which had suffered most from convulsions.

The appearances in the bodies were similar to those usually found in phosphorus poisoning. In two of the dogs the liver had undergone fatty degeneration, and the kidneys had undergone this change in all of them. This is a remarkable fact considering the shortness of the period for the duration of the poisoning.

3. *Strychnia*.—This organic poison, in the form of dissolved acetate, was injected hypodermically into the thighs in three dogs and one rabbit. No. 1 was a dog of middle size. The dose of acetate was .77 gr. Symptoms came on in a few minutes, and the animal died in forty minutes. The initial anal temperature was 39.5° (103° F.). The thermometer continued to rise, and at the instant of death it marked 42.5° c. Under the operation of this remarkable poison, the anal temperature had actually risen 3° c., or 5.4° F. After death, the temperature fell at the rate of one-tenth of a degree for every four minutes. Rigor mortis was apparent for four days. No. 2. The injected dose of acetate of strychnia was 2.3 grains. Symptoms occurred in seven minutes and death in thirty-three. The temperature had risen 2.5° c., or 4.5° F., at the instant of death. Rigor mortis commenced in twenty minutes, and lasted four days. In No. 3, a small dog, the dose of acetate of strychnia was 1.54 grains. Symptoms were observed in four minutes, death in twenty-nine minutes. The increase of temperature was 3.3° c., or 5.94° F. Rigidity came on in two minutes, and lasted four days. In the rabbit, one grain and a half of acetate



of strychnia was injected. Symptoms were observed in six minutes and the animal died in forty-five minutes. The initial anal temperature was  $39.4^{\circ}$  C. (about  $103^{\circ}$  F.). The thermometer at the instant of death marked  $42.5^{\circ}$  C.; a difference of  $3.1^{\circ}$  C., or  $5.58^{\circ}$  F. The body remained rigid for three days.

These experiments on poisoning with strychnia are then compared with those related by other authors. They show the rapidity of absorption under the favourable condition of hypodermic injection, and further they prove how rapidly the life of an animal is destroyed by strychnia. Dr. Tamassia calls attention especially to the rapid supervention of rigor mortis and its long duration in the body in this form of poisoning. He corroborates the results obtained by Brown-Séquard, namely, that rigor mortis comes on quickly, and lasts for a longer time in those cases in which muscular energy is exhausted by repeated attacks of convulsions before death. In connection with this persistence of rigidity, he considers that putrefaction is retarded, owing to the destructive influence of strychnia upon those microscopic organisms (bacteria) on which putrefaction is now believed to depend. From some experiments with infused muscle, he found that, when acetate of strychnia was employed, the fibre resisted putrefactive changes, and the bacteria and vibrios were few, and the liquid not offensive; while, in the absence of the acetate, putrefaction took place, the structure of the muscle was destroyed, and the animalcules were numerous. He therefore looks upon strychnia as a retarding agent in putrefactive changes. It suspends them for a time, but does not arrest them altogether. These facts observed in strychnia poisoning may, however, be thus explained. Putrefaction does not commence until rigor mortis has ceased; hence, as under the effects of strychnia its duration is usually longer than in other forms of poisoning, so it happens that putrefaction takes place more slowly.

Regarding the appearances indicative of strychnia poisoning, Tamassia gives the following summary. The membranes and substance of the brain were strongly injected in three of the experiments, the lungs were congested, the heart presented no uniform condition, the blood was dark-coloured and fluid, and when examined by the microscope and spectroscope it presented nothing unusual. In the stomach and intestines there were found patches of congestion of slight extent. The stomach as well as the commencement of the intestines and the urinary bladder were found by him in a contracted state, as if from spasm of the muscular coat. This is an appearance which, so far as we know, has not been observed by other experimentalists. The kidneys and liver were slightly congested, but presented no structural changes. In all the cases, the spinal marrow and its membranes were highly congested, but there was no parenchymatous or intermeningeal effusion of blood.

Asphyxia has been usually assigned as a cause of death in strychnia poisoning, the intercostal muscles being fixed in tetanic spasm by the direct effect of the poison. Tamassia considers, however, that the proximate cause may be more frequently traced to the injury done to the great nervous centres, the brain and spinal marrow.

The last point which he notices is the remarkable effect of the poison upon animal heat. Under the action of arsenic and phosphorus, there was from the beginning to the end of the poisoning a regular and progressive fall. In the action of strychnia, it will be

noticed, there was a regular rise of temperature. The differences are strikingly shown by the author in three engravings, which represent small squares, the horizontal lines indicating the duration of the poisoning in minutes, while each of the vertical lines corresponds to the tenth part of a centigrade degree. The curved lines of arsenic and phosphorus commence at the top and descend until death, while those of strychnia begin at the bottom of the plate and ascend until death, when they begin again to fall.

It has been long known that during the paroxysms of strychnia poisoning great heat is evolved. It is sensible to the touch in animals, and Falck, Wunderlich, and others, have experimented on this subject in order to measure the degree. Tamassia refers to these experiments, and compares the results with his own. It is now known that the source of heat lies in molecular changes. Muscular action means increased oxidation, molecular change, and thence increase of temperature. This was seen not only in the action of strychnia, but also in the effects of the other two poisons. Thus, during the convulsions produced by arsenic and phosphorus the descent of the thermometer was suspended. In tetanus from disease, and in the convulsions produced by an electric current, an increase of temperature takes place from the same cause.

[These researches show that observations of temperature may hereafter aid diagnosis in cases of poisoning. As a rule, poisons cause a depression of the thermometer. This is observed in the action of mineral poisons. Tamassia's experiments have demonstrated this fact with regard to arsenic and phosphorus. More observations are required, and we trust that henceforth every case of poisoning in our hospitals will be submitted to the test of the clinical thermometer, and the variations of temperature in the progress of treatment recorded. In a case of poisoning with corrosive sublimate which lately occurred in St. Thomas's Hospital, the temperature of the patient on the third day had fallen to  $96^{\circ}$ . The woman died the following morning.—*Rep.*]

ALFRED S. TAYLOR, M.D.

## TARCHINI-BONFANTI ON BURNS IN RELATION TO FORENSIC MEDICINE.

In the *Rivista Sperimentale di Freniatria e di Medicina Legale*, April—June 1877, Dr. Tarchini-Bonfanti contributes a paper on burns on the living and dead body in their medico-legal aspects. Its tendency, however, is rather to set out the well-known difficulties in forming an opinion than to remove them. His attention was drawn to this subject by a remarkable case. A strong healthy child, five years of age, was put to bed in a wicker cradle. It had on a night-dress, and was covered with bed-clothes, as usual. In about two hours afterwards, the family perceived that the room in which the child had been placed was on fire. On rushing to the spot they found the child dead in its cradle, and some articles of linen which had been placed on a small wardrobe on fire. The wardrobe itself, which was full of linen, was also burning. The bedroom was filled with a thick smoke, and to all appearance the child had died from suffocation. On examining the body of the child, a number of burns were found upon it, but none of a severe nature. There were burns on the forehead and face, on the back and front of both arms, but especially on the left side at the posterior part and left side of the chest, on the lumbar region,

on the buttocks, and on the lower extremities. No other lesion was found.

The wardrobe, which, with the linen upon it, was burning when the room was entered, was 70 centimetres, or three quarters of a yard, distant from the cradle in which the child was lying.

On the theory that the child was suffocated, it could have lived but for a short time after it had been left in the room; and the question arose whether it was actually dead when the slight burns found on its body were produced. The body was exhumed and examined twenty-three days after death.

It is stated that neither the night-dress of the child, its cradle-clothes, nor the wicker cradle itself showed any marks of burning.

Dr. Tarchini-Bonfanti states that every suspicion of criminality was eliminated by the general evidence given before the judicial authorities. The woman who had placed the child in the cradle must have unconsciously set fire to the linen on the wardrobe, and have left the room without perceiving what had happened. The linen and wardrobe were both burning in her absence. Passing over a number of questions put by the judicial authorities in the case, the reporter fixes upon one remarkable for its novelty. "Could the numerous burns found on the body of this child have been produced by radiant heat as well as by the direct application of fire?"

Considering that the child's body was well protected from the fire by the cradle, as well as the sheets and coverings, which presented no marks of burning, also that burns were found on parts of the body which must have been completely covered with clothing, it seems utterly impossible that radiant heat could have had any effect in producing them on the skin. Some of them were so situated that no radiant heat could reach them; and if it had, it would have first showed its effects on the clothing which covered the child's body. The clothing was in no place burnt or singed.

Some experiments were performed, in which articles of clothing and a leg from a dead body partly covered were exposed under similar conditions to the radiant heat of a coke furnace. The clothing was scorched, but not burnt, while the leg acquired a brownish colour, and was hardened upon the surface; but the cuticle was not raised, and on cutting into it there was no other change than that the fat had melted. On a repetition of the experiment at a shorter distance with another leg more covered, the results were similar.

There is no doubt that living skin would be affected by heat more than that which was dead. These experiments throw no light on the source of the burns on the body of the child. The person who found the child dead was unable to describe the attitude in which it was lying when discovered, and it was inferred that when it first felt the effects of the smoke and fire it might have moved itself about in the cradle and thus exposed the different parts of its body to the action of the fire.

The reporter felt himself placed in great difficulty. He distinctly states that the general evidence received in the case positively excluded all idea of a criminal act or criminal interference. No one had entered the chamber from the time that the child had been laid in the cradle until it was found dead. The medical jurist was here face to face with a difficulty on which no light could be thrown by science. Convinced of the necessity of exercising extreme prudence in answering the medico-legal question proposed, Bonfanti

came to the conclusion that "he could not deny the possibility of the numerous burns found on the body of the child having been caused by heat radiated from the burning linen and wardrobe."

[There can be no doubt that radiant heat of sufficient intensity can produce on the living body burns and other injuries similar to those arising from the direct application of heat to the skin. The radiation, as it applies to burning linen and a wardrobe at a distance of three quarters of a yard, would not have been sufficient to cause burns on the skin of a child lying in a cradle covered with clothes. But assuming the heat to have been sufficiently intense for this purpose, it is impossible to understand how it happened that there were these scorplings or burnings of the skin, without any corresponding damage to the child's night-dress and the clothes covering its body. Then, again, as the burns were very numerous and all over the body, back, and front, it follows that the child must in some way have exposed all these parts successively to the action of radiant heat, a very improbable supposition. So, again, if the linen was accidentally ignited when the woman left the room, the progress of the fire must have been unusually slow, as two hours had elapsed before it was discovered, and it had not then reached the cradle and the clothing at only about two feet distance from it. This is just one of those medico-legal cases in which scientific facts are utterly inconsistent with oral testimony on oath. The facts seem to admit of no other scientific explanation than that the body of the child must have been covered over and laid in the cradle after the burns on the head, trunk, and legs had been in some way produced, and they are described as having characters resembling those of burns on the dead rather than on the living body. There were no blisters or lines of redness, and they were rather scorplings than burns. Heat must have been applied to different parts of the skin at different times, and it is impossible to admit that this could have happened as the result of accident from radiant heat under the circumstances described.—*Rep.*] ALFRED S. TAYLOR, M.D.

#### HAMILTON ON FRACTURES OF THE FEMUR.

WE reproduce entire from the *Philadelphia Medical Times* of November 24, a Clinical Lecture delivered at the Bellevue Hospital by Dr. F. H. Hamilton, one of the highest authorities on the subject of fractures and dislocations.

On entering upon my term of service at the Hospital on the 1st of the month, I found ten cases of fracture of the shaft of the femur in the wards. A number of these I propose to bring before you to-day; but, in order that you may properly appreciate the principles involved in their treatment, it will be necessary for me first to call your attention briefly to the progress which has been made in the treatment of this class of fractures during the last hundred years. My remarks, you are to understand, will be limited exclusively to fractures of the shaft of the femur, and will be still further limited to fractures of this character occurring in the adult. In fractures of the thigh in children there are material differences, to which it will be impossible for me to allude, for lack of time, on the present occasion.

In the first place, I wish to remark that fractures of the shaft of the femur in the adult are almost invariably oblique,—not moderately so, but extremely oblique, as a general rule. It is therefore impossible



to make the fragments set, in the ordinary acceptance of the term; and they can only be maintained in position by extension and counter-extension. The powerful muscles attached to them necessarily make them overlap each other, giving rise to the hideous deformity which is seen in the two specimens that I now show you. In such a case the bulging noticed is always equal to twice the thickness of the shaft, even if there should be no callus to make it still greater. This, then, is the beginning of our study of fractures of the femur; they are oblique.

Now, how is this powerful action of the muscles of the thigh, causing the fragments thus to override, to be counteracted? Until the latter part of the last century (from the remotest periods, as far as we have any knowledge), surgeons were in the habit of employing a simple long straight splint. By making extension and counter-extension they pulled the fragments out into position, and then applied the splint to the side of the limb with bandages. Such a long splint I now show you, and this particular one was handed to me by one of the surgeons in Stonewall Jackson's army, where he was frequently obliged to have recourse to it. Towards the close of the eighteenth century, however, Pott wrote a short treatise, in which he showed that there had always been considerable shortening after fractures of the thigh, explained the reason why this was so, and contended that the muscular contraction giving rise to it could be overcome by keeping the limb in a flexed position and thus relaxing the muscles. This publication made an immense impression in the medical world, and, as a consequence of it, the double inclined plane came into general use in the treatment of this class of fractures, both in England and in America; though it was never adopted by the French and German surgeons. The theory was specious, but unsound. It has its advocates even up to the present day however, and a few leading surgeons in this country, among whom I may mention the distinguished Nathan R. Smith, of Baltimore, still prefer the double inclined plane to any other mode of treatment.

Almost the entire surgical world, however, has returned to the use of the straight splint; but very important modifications have been made in it. The first of these was introduced by Boyer, and since his time almost innumerable devices, some of which I show you here, have been suggested in connection with it. Most of the modifications involved some form of screw by which extension could be made, and also some appliance for making counter-extension. The way of getting hold of the foot in order to keep up extension was a very important matter, and always gave a great deal of trouble. A few of the various devices which have been suggested I now exhibit to you. They are all apparently good; but, however carefully the foot-band might be padded, they all invariably caused excoriation and ulceration when any considerable traction was maintained for any length of time.

As to the matter of counter-extension, that was almost exclusively made by pressure upon the perinæum, where the tuberosity of the ischium was the *point d'appui*. The best of all these appliances was the flat perineal band, on account of the comfort with which it could be worn by the patient. But what has been the history of these? Every old surgeon can recall a number of cases, especially where the patients were delicate females, in which a deep ulceration resulted from the pressure made by the perineal band.

It will thus be seen that surgeons laboured under two great difficulties, viz., in the way of making suitable extension and suitable counter-extension by means of the extending band and the perineal band. In actual experience it was found to be altogether unsafe to employ a traction-force of over ten pounds, and this was usually quite insufficient for the purpose required.

It is to the late Dr. Crosby, of Hanover, New Hampshire, that the honour must be given of having made the first great step in the improved treatment of fractures of the femur. About twenty years ago he conceived the happy device of applying strips of adhesive plaster to the sides of the leg for the purpose of making extension, and by this means we are now enabled to employ with impunity a weight of twenty-five pounds, if necessary. This was indeed a great triumph. For the next great step in the treatment we are indebted to a surgeon of Schenectady, to whom it occurred that the necessity of having a perineal band might be obviated by elevating the foot of the bed. When this was first suggested to me, it was thought to be necessary to have the foot of the bed raised about two feet from the floor; and in the first case in which I made use of the plan the patient complained that he felt as if he was going to have apoplexy, from the tendency of the blood to flow to the head. I was not, therefore, very favourably impressed with the idea; but the method was taken up with enthusiasm by Dr. Moore, of Rochester, and, as it was before long demonstrated that it was only necessary to elevate the foot of the bed four inches, the measure was adopted by almost all surgeons, and the perineal band was soon abandoned altogether. It is now many years since I have seen a perineal band in use in this hospital. One caution I will mention in raising the foot of the bed from the floor. It is always necessary to have the pillow under the patient's head alone; for if it is under the shoulders also, instead of having the whole body act in the way of making counter-extension, you will only have the portion from the pelvis down.

Thus, then, you see, we have at our command reliable means for both extension and counter-extension without causing inconvenience or injury to the patient. But in making extension we are not able to go beyond twenty-five pounds' weight, for the reason that the ligaments about the knee-joint become painful when a traction-force exceeding this is applied. You know that in standing, however erect, the knees are never kept perfectly rigid and straight, but are always flexed to a slight extent; and if a greater weight than twenty-five pounds is employed when the body is in a recumbent position, the strain upon the ligaments soon becomes unbearable. Twenty-five pounds is the maximum weight to be used, and is ample for all practical purposes. Oftentimes a considerably smaller weight is quite sufficient; and my rule is gradually to increase the amount of extension until the patient cannot bear any more with comfort.

To the Germans we are indebted for many important advances in both medicine and surgery; but, in one instance, the American surgeons followed the teachings of the German authorities, and went a step backwards. This was by the adoption of the plaster-of-Paris bandage in the treatment of fractures of the femur. At first, it was supposed to be necessary to make counter-extension by pressure upon the perinæum, and, as a consequence of the plaster treatment with this in view, I have seen an

enormous ulceration result, extending for several inches around the perineum, and as deep as my hand. When this idea was abandoned, the attempt was made to obtain counter-extension by means of the large muscles upon the back of the upper part of the thigh; but in a person of small muscular development this was utterly impossible to do, and in any case the plaster application soon became so loose as to be utterly valueless in this respect. In this hospital I saw more shortening and more crooked limbs after fracture of the femur, while the plaster treatment was employed, than I ever saw before or have ever seen since. What is more, I saw three deaths actually result from it, and these have been carefully recorded in the latest edition of my work on *Fractures and Dislocations*. I tell you, gentlemen, the introduction of this treatment was not one step, but several steps, backward. I do not speak from mere hearsay, but from actual experience; for three or four years I treated every alternate case occurring in my service with the plaster bandage, and I always observed the result accurately. Now, I am happy to say, the method has fallen into general disuse here, almost all of my colleagues in the hospital having abandoned it. If you attempt to employ it in any country practice, I feel quite sure that you will give it up too, after having made trial of it about twice.

Now we are prepared to look at some cases in process of treatment; and in the first one which I show you, you will observe that no side-splint is employed. This is sometimes unnecessary; but, in many instances, it forms an essential feature of the treatment. Instead of one pulley and one weight, there are two of each,—the two cords extending from each side of the foot-piece. This modification was suggested by Dr. Monroe, of the House Staff, with the idea of preventing external rotation of the limb; and it does accomplish this to a certain extent. In this case, a plaster-of-Paris bandage has been applied over the adhesive strips, in order to keep them more firmly in position.

In the second case before you, there is also no side-splint, as you will perceive, and rotation is guarded against not only by having two weights and pulleys, but also by a little apparatus contrived by Esmarch. This consists of a cushion on which the foot rests, and which is fastened to a wooden cross-piece for the purpose of holding the limb steady, and the cross-piece is movable upon a frame when the position of the foot is changed. We have, however, a simpler means, I think, of accomplishing the same result in a better manner; and this I will show you presently. In this case, silicate of sodium, instead of plaster-of-Paris, as in the last, is applied over the adhesive strips upon the leg. The patient has now been under treatment for more than seven weeks, and yet I am still able to detect a little crepitus at the seat of fracture. As he is a young man, and apparently in good health, the process of repair would seem to have been going on rather slowly; but I have no doubt that a good result will be obtained in the end. In my forty years and more of practice I have never had a single case of non-union occur in my own hands, and I have certainly treated a pretty large number of these fractures; though I have seen some in consultation. I do not say this in any spirit of boasting; but such has been my good fortune.

I now pass to the third case, the treatment of which is a typical example of what is known as Buck's method. Dr. Buck has done a great deal for

the treatment of these fractures; but the various improvements which have been adopted in its most approved form have been suggested by so many surgeons, that I think it is hardly just that it should be called by his name, and I would suggest the "American plan" as a more appropriate title. You observe its prominent points: the long splint, with its lower extremity fitted into a light wooden framework to hold it steady, and its upper portion bound to the side of the chest by a wide roller-bandage; the foot-piece (to which the weight is attached by the cord passing over a pulley) sufficiently wide to prevent any pressure being made upon the external or internal malleolus; the adhesive strips extending up to the knee, and covered by a roller to keep them in position; the four short side-splints about the thigh, covering the seat of fracture; and, lastly, the foot of the bed elevated four inches above the floor, for the purpose of making counter-extension. The adhesive plaster should not pass above the knee, for if it reaches higher than that it will be likely to do more harm than good, by involving some of the muscles which are attached to the upper fragment of the femur. For the four independent side-splints, within the long one, we are now in the habit of using felt, because it is a light material and when once moulded to a part retains its shape permanently. They are kept in position by a bandage, and can be removed at pleasure for the purpose of examining the seat of fracture, or for any other reason that may necessitate it. They are extremely useful in preventing looseness of the limb. As a general rule, I regard the long splint as the most essential requisite for making a straight thigh, and it acts in two ways: *first*, by preventing eversion, and *second*, by keeping the whole body straight. In its simplicity and efficiency it is far superior to the plaster-of-Paris bandage. Theoretically, the latter, after being once applied, is supposed to remain *in situ* until the case is discharged cured; but, practically, it is found to get loose in a week, and in two weeks it becomes positively necessary to remove it and apply an entirely new dressing, which involves no inconsiderable amount of labour. This, of course, has to be repeated about every fortnight until the end of the treatment. Here is a little boy upon whom the plaster was applied only a few hours ago, and, though it was very carefully and thoroughly done, you will observe that I can already get my hand underneath the part of the bandage which passes around his body. In the course of a week the whole will be so loose as to be of no practical use whatever.

In all the cases which I have shown you, there will probably be some shortening, varying from three-eighths to one-half of an inch; for, in fractures of the femur, more or less shortening is the rule, and not the exception. Some writers would have us believe that, naturally in about every third man, one lower extremity is longer than the other; but this is certainly not the case; for, were it so, this disparity would very frequently be corrected by the occurrence of a fracture. In reality, however, I find that in about nine out of every ten cases one limb is slightly shorter than the other after my treatment for fracture.

The next case which I shall show you is a young man who has had one of his thighs fractured twice. The first time he was treated by some other surgeon, and the last time by myself, quite recently, at St. Francis's Hospital. It is necessary that we should be very accurate in making measurements after fractures of the femur; and my method is as follows.



Placing my thumb-nail upon the ring of the measuring-tape, I do not put it directly upon the anterior superior spinous process of the ilium, but underneath the latter, upon the tensor vaginæ femoris muscle, and then press it firmly up against the bone. The lower end of the tape is now passed to the external malleolus, and in the case before us I find that the limb which has sustained the two fractures measures thirty-four inches, while the uninjured one measures thirty-four and a half inches.

The patient tells me that, a day or two ago, while making unusual muscular exertion, he heard something crack, and experienced a sensation of pain and weakness at the seat of the recent fracture. This was no doubt due to the fact that the callus, being still new and tender, gave way to a certain extent; and it will be necessary for him to remain perfectly quiet for a few days, in order that firm union may again occur in it.

In conclusion, I may remark that I was very much gratified to-day by the reception of a copy of my book translated into German. However unworthy an effort it may be, it is a matter of some pride to me to know that it is the only exhaustive treatise upon fractures and dislocations extant in any language, except the great work of Malgaigne; but that appeared twenty-seven years ago, and has now, of course, become in many respects practically obsolete.

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#### FOX, ALLBUTT, BARLOW, PARKER, AND BARNES ON PARACENTESIS IN PLEURISY.

DR. WILSON FOX, in a paper on "The Mortality of Pleurisy considered in Relation to the Operation of Paracentesis Thoracis" (*British Medical Journal*, November 24th and December 1st, 1877), has collated a considerable series of statistics showing the relative mortality of pleurisy treated with and without paracentesis. The statistics are gathered from the great hospitals of Vienna, Prague, Paris, London, Manchester, and Berlin. The first table shows the mortality per cent. of *all* cases of pleurisy treated without paracentesis, collected from these various sources, and extending over a period of 32 years. The mean total mortality is estimated at from 10 to 17 per cent., though in some cases and in some institutions it fell as low as from 6 to 7 per cent., and at the Children's Hospital, Vienna, it was as low as 1.6 per cent. With this mortality, which Dr. Fox admits is higher than he expected to find, he contrasts the statements of Louis, Walshe, and Gairdner, that uncomplicated pleurisy is rarely fatal; and he draws up a second table comparing the mortality of complicated and uncomplicated pleurisy. The mean mortality in the latter case is but 6 per cent.; and in uncomplicated serous effusions he considers Ewald's average of 2.2 to 2.7 per cent. to be quite an outside limit. Dr. Fox then passes to the consideration of the statistics of cases of paracentesis, and he finds the mean mortality after operation raised to 27 per cent.; only falling to or below 10 per cent. in the hands of observers whose operations were confined to serous effusions in the early stage. The table is drawn up with laborious care, the cases, upwards of 1600, being collected from a great number of authors, both English and foreign. The mean mortality of serous effusions after paracentesis is shown to be 17 per cent.; of sero-purulent and purulent, 37 per cent.; of sanguinolent, 77 per cent.; and

of pneumothorax, 85 per cent. The causes of death after paracentesis in serous effusions are found to be purulent transformation, tubercle, malignant disease, and general grave complications. Purulent transformation was the cause of death in 45 per cent. of the total number of cases that proved fatal; or in 25 per cent. if all cases complicated by phthisis and other grave maladies be excluded; or in from 10 to 5 per cent., of all cases operated upon. Dr. Fox does not refer this change to the causes usually assigned, *i.e.*, to an original tendency to purulence shown by a lactescent appearance of the fluid when first aspirated, nor to the admission of air into the pleura, nor to the presence of tubercle, nor to the existence of pyrexia at the time of operation, though in individual cases each of these may be the cause of purulence, but rather to parenchymatous changes in the structure of the pleura itself, the artificial withdrawal of the fluid having a tendency to intensify congestion, and to increase inflammatory action. He believes that there is but little natural tendency in serous effusions to undergo purulent transformation, and that in the vast majority of cases where it has followed paracentesis it must be directly ascribed to the operation. Considering the whole question of serous effusions, Dr. Fox holds to the opinion that death from uncomplicated serous effusion is among the rarities of medical experience, and that reviewing the results obtained by paracentesis he cannot look upon it altogether as a life-saving operation. He advises that greater caution should be exercised, and that it should not be performed in very early stages of the disease or without distinct indications for its necessity, the most important of these being threatened failure of cardiac power. The most potent argument in favour of an early operation, he finds, is the fear that the long continuance of the effusion may endanger the expansibility of the lung. He admits, however, that the cases which recover under early paracentesis do so more rapidly than if it be deferred, or if they be left to nature.

Turning to purulent effusions treated by paracentesis, he considers the mortality of 37 per cent. very high, though he anticipates that it may be diminished by a careful application of the antiseptic method. It contrasts unfavourably with the statistics of the non-operated cases left to spontaneous cure. Of Anderl's cases of empyema the mortality of the non-operated was 13 per cent. less than the operated, the cases that resulted in spontaneous external opening being the most successful; out of 25 cases the deaths were only two, or 8 per cent.; of eight cases of bronchial perforation the deaths were three, or 37 per cent. Dr. Goodhart reports 11 cases of spontaneous external opening, all of which recovered; Ewald six, three of which died. Dr. Fox considers it more than probable that in certain cases the pus is reabsorbed.

In conclusion, Dr. Fox urges that the operation of paracentesis should not be resorted to carelessly and in haste to produce immediate and temporary relief, that the risks are great, and that many cases may recover if left to the action of nature. He further considers that, when the operation is necessary, the withdrawal of a small portion of the effusion gives immediate relief, and is very frequently followed by the absorption of the remainder.

In answer to a question put by Sir William Jenner during the discussion that followed the reading of this paper at the last meeting of the British Medical Association, as to the relative mortality of the opera-

tion of paracentesis at different ages, Dr. Fox appends an addendum. He shows, by statistical tables, that the deaths after the age of thirty exceed those before that age in serous effusion by 16 per cent. ; in purulent effusion by 9 per cent. ; in uncomplicated serous effusion by 9 per cent. ; in uncomplicated purulent effusion by 6 per cent. Pleurisy, on the other hand, seems more frequently to occur between the ages of twenty and thirty.

Dr. Clifford Allbutt ("On the Treatment of Pleuritic Effusion," *British Medical Journal*, November 24, 1877) declares his enthusiastic belief in the value of paracentesis. There is no doubt in his creed, and it is thus boldly expressed. "Let him then who hesitates to tap the pleura remember that, before his next visit, his patient, seemingly so tranquil, may have passed into the deeper stillness of death. Whether the effusion then be rapid or slow in its flood, if the cavity be full, operate without delay. This is, I believe, one of those golden rules to which there is no exception." Speaking also of empyema he says: "If I have one conviction in medicine more urgent than another it is this, if pus or other septic material be present in the body, we must not rest until it is removed. I therefore dislike and reprobate all temporising with an empyema. Out with it, and provide against a reaccumulation." He divides pleurisy into acute fibrinous pleurisy, quiet effusive pleurisy, empyema, and pleuritic dropsy. The first, characterised by pain and pyrexia from the outset, is of an active and inflammatory nature, and the exudation has a tendency to reabsorption. Such cases he treats by leeches, diuretics, and blisters. If dulness continue after the fever has abated, he puts the patient under a course of mercury. Only when the circulation is impeded does he resort to tapping. He declares that in these highly organised effusions sup-puration rarely occurs after operation, even if air enter the pleura. He recommends in these cases the use of the aspirator, with fine cannulæ, and to puncture the pleura repeatedly, drawing off what is to be had at each point. In quiet effusive pleurisy in the serous stage, tapping is recommended unhesitatingly ; and, if the operation be performed early, the results are excellent—a serious illness of three months under medical treatment being converted into a moderate indisposition of three weeks. The longer, however, operation is deferred, the less confidently can the best results be hoped for ; the more danger of empyema and of clots, and the more the danger to lung and constitution. Delay, he urges, in large effusions exposes the patient to the risk of sudden death ; and, though in small effusions delay and medicinal treatment may be counselled, yet Dr. Allbutt finds it better to tap in all cases where more than two pints of fluid are present. He considers, however, that in quiet serous effusions the aspirator is unadvisable, as no more fluid should be withdrawn from the chest than the lung can replace at that time. He prefers and uses therefore a fine trocar and cannula, arranged so as to act on the syphon principle. In empyema he advises opening the cavity freely with antiseptic precautions as low down as possible, to let the pus drain out.

In a paper ("Notes on Pleuritic Effusion in Childhood," *British Medical Journal*, December 1, 1877) Dr. Thomas Barlow and Mr. Robert Parker record their personal experiences. From the frequent difficulty of recognising pleurisy in children, and diagnosing between serous and purulent effusions, they recommend, as a *matter of routine*, the use of the

hypodermic syringe as a diagnostic aid. In the treatment of serous effusion, they recommend very strongly that the removal of a very small quantity of fluid is to be preferred to emptying the pleura ; and they state that this is frequently rapidly followed by absorption of the rest. This may be done by the aspirator, or even by the hypodermic syringe. If the effusion be considerable and the dyspnoea urgent, then they advise emptying the chest, to give the lung the chance of expanding, which it does in a rapid and forcible manner in children. Their opinion is against the treatment by iodine, diuretics, and blisters.

From the marked majority of cases of pleurisy in children being empyemata, and from having practically ascertained the fact that a serous effusion will remain serous for an indefinite period, they lean to the opinion that purulent effusions are not so from transformation, but are empyemata *ab initio*. To evacuate the pus if collected in small quantities separated by adhesions, a hypodermic syringe capable of holding two drachms is recommended ; if the collection be larger the aspirator-trocar (Potain) should be used. It is thought better to perform paracentesis under chloroform pushed to complete insensibility, to avoid collapse and cough. If pus should become fetid or rapidly accumulate in larger quantity permanent drainage is advised, and it is contended that in all cases this should be done by a double opening, to secure more complete drainage. The first opening should be made in the front of the thorax ; the second below and internal to the angle of the scapula. In lieu of washing out the cavity with a syringe or irrigator, it is thought better to place the little patient in a warm bath, containing a weak solution of Condy's fluid, or carbolic acid, with the water high enough to cover the upper opening. Of the natural modes of cure, they consider rupture through the lung the least unfavourable. Of eight cases under their care two died, two made good recoveries, and four have done indifferently well. Spontaneous evacuation by external opening has given in their experience no good result, being associated with ulceration of the pleura, necrosis of the rib or rib-cartilage, abscess, unhealthy ulceration of adjacent tissues, and subsequent deformity.

Dr. Henry Barnes ("On the Value of Paracentesis of the Chest in the Treatment of Pleuritic Effusion," *British Medical Journal*, December 1st, 1877) publishes eleven cases of pleurisy in which paracentesis was eminently successful. The cases were three of simple acute pleurisy, relieved and cured by a single operation ; two cases of acute pleurisy occurring as a complication of enteric fever, in each of which paracentesis was performed three times with complete recovery ; and in the three cases of chronic pleurisy two recovered after one operation ; the third had paracentesis performed fourteen times, Dr. Barnes considering the pleura had lost its absorbing power from the considerable stretching it had undergone through long neglect of the case. In the treatment of empyema, Dr. Barnes speaks highly of paracentesis. He reports three cases ; in one necrosis of the parietal pleura occurred ; a double opening was made and a drainage-tube inserted, and the cavity washed out by a weak solution of carbolic acid. The third, one of traumatic origin, was complicated with pneumonia. After recovery, the affected side in the first case measured  $\frac{3}{4}$  of an inch, in the second  $1\frac{1}{4}$  inch, less than the sound side. Dr. Barnes considers that the danger of purulent transformation is



entirely obviated by the perfection of the instrument used, the entrance of the air into the cavity of the pleura being thereby prevented. He thinks in left-sided pleurisy operation should not be long delayed, and in all cases where dyspnoea is urgent there is more danger in delay than in operating. He makes a rule to operate at once, without waiting for urgent dyspnoea to set in, in cases when the chest is two parts filled with fluid; but if but half full he waits, and tries the treatment by rest and iodine applications and diuretics, which is frequently successful. He recommends the use of Potain's aspirator, and that the puncture should be made in a perpendicular line with the angle of the scapula, in the eighth or ninth interspace, and an inch and a half above a horizontal line drawn through the lowest point at which the respiratory murmur is distinctly heard on the other side. His practice is also to withdraw as much fluid from the chest as possible. For after-treatment, he recommends iodine applications externally, and diuretics. A. M. H.

[To be continued.]

### TAQUET ON HEREDITY IN ALCOHOLISM.

MONTESQUIEU has said that the strength of a nation depends upon the number of men it can call into the field when threatened by an enemy. The history of the late disastrous war showed that in spite of courage and arms of precision this remains true, as the victory was with the large battalions. Whence this physical decadence? The year 1873, compared with 1872, shows an increase of 51,523 on the total mortality, and a diminution of 19,636 on the birth rate. M. Taquet would place the abuse of spirits in the first line of causes which tend to depopulation. If the drunkard were the only sufferer by his excess, consolation would be easy; but, as Lancereaux has said, alcoholism is not only a disease of the individual, but is a family disease, and projects its evil influence upon the race. M. Rousel says, "Absorbed by a taste which quickly transforms itself into an irresistible need, one sees alcohol impregnate strongly the organism, alter the radical forces, and degrade little by little the physical and moral nature of the man. One sees it follow the individual in his offspring, his family receiving from him a fatal heritage in debility, deafness, a crowd of nervous disorders, moral imbecility, idiocy, mental alienation, and wicked instincts. The Indians of America have disappeared before the destructive powers of alcohol, when fire and sword failed to vanquish them. Nor is this fact new in history, for the legislation of Lycurgus favoured drunkenness in the conquered, in order that their healthy aspirations might be dulled, and that they might the more easily submit to slavery."

In alcoholism, as in all affections which are transmitted from ancestors to descendants, we may recognise the heredity of similitude, as well as the heredity of change. The heredity of similitude presents itself in two aspects. It remains latent, and requires the influence of example and circumstance to awaken it, or it may burst forth in a sudden manner without seeming cause. Esquirol reports a case where the death of a grandfather and father had quickly followed their thirst for drink, in which the little son at five years of age showed a decided taste for the same kind of drink. M. Taquet knows of a case where a person died early from alcoholic excess, leaving an infant, who at a very early age showed a decided

tendency to intemperance, until now, at maturity, he has developed a partiality for the same drink which his father loved. Fusch speaks of a dissolute drunkard who came to his end after having plunged his family into profound misery; two of his sons early presented the same vice, and the third, after remaining sober until his thirtieth year, suddenly drank in a violent way. Of suicide associated with alcohol, the history of the family Dufray presents an interesting example. It consisted of four brothers who were addicted to the most excessive drunkenness and licentiousness. The eldest drowned himself, the second hanged himself, the third cut his throat, and the fourth threw himself from a third storey and was killed. Drunkenness is a complex state, being generally accompanied by physical or nervous disturbances, as will be seen in the following example.

*Observation I.*—The head of the family was a drunkard and debauchee. His wife was remarkably sober, although the daughter of a drunken father, and sister to two youths who both had inherited their father's vice. Of this marriage were born three boys and two girls. The eldest is as immoral as his father, and presents an organic lesion of the heart. He married a wife who seems to offer nothing abnormal. They had three children, two girls and a boy. The eldest manifested violent sexualism at an early age, and gave birth to a hydrocephalic child to an unknown father. The second girl is almost as dissolute as her sister, and the boy is quite imbecile, epileptic, and a drunkard.

2. The second son has been treated twice in an asylum, for mania with homicidal impulses.

3. The third son, after an existence of debauchery and pleasure, died at the age of 21 years, of consumption, hitherto unknown in the family.

4. The eldest of the girls has been married for 12 years to a sober, intelligent man. Out of six of their children the heredity has fallen upon one, who is drunken, licentious, and a thief.

5. The youngest daughter has lost all moral sense and decency, leading a most irregular life, although well married.

This observation presents two interesting considerations, viz.:—

1st. Sexual desires show themselves early in the children of drunkards, and are associated with an absence of moral sense.

2nd. Phthisis, when not hereditary, is capable of being produced by spirituous excess. Magnus Huss and Laury have supported this thesis by numerous examples.

*Observation II.*—The father died of cerebral softening, determined by alcoholic excess. The mother died of ascites; cause unknown. The result of this marriage was one daughter, who married a man who has no trace of hereditary disease. They have had six children: 1st. An idiot born blind; 2nd. An imbecile; 3rd. An imbecile; 4th. Imbecile and born blind; 5th. Well gifted, morally and physically; 6th. Born an idiot. Here we find the evil influence passing over the immediate descendants and attacking in various ways the next generation.

*Observation III.*—The grandfather was a drunkard, which is all that is known of him. His wife died of cancer; an only son, a rough and violent fellow, died of alcoholism in an asylum for the insane. The son of this latter was of an extremely impressionable nature, not able to bear the sight of any cutting instrument, and was liable to be thrown into a state of nervous excitement at the sight of a soldier or an armourer's shop. He married, and

since has had an attack of mania, during which he attempted suicide. He has had three children, of whom the eldest died soon after birth; the second, not yet two years old, presents nothing worth notice; the third was hydrocephalic, and died in convulsions.

Other things being equal, the hereditary transmission, to whatever order it appertains, will be more surely by the mother than by the father. The hereditary influence of the mother is noted by Esquirol in the physiognomy, in the conformation of the body, the habits and predilections. Baillarger and Dagonet support this, and Gintrac says, "The mother exercises a double action—one which she shares with the father in the conception, the other which is proper to her, and which depends upon the relations established during the intra-uterine life between her and the product of conception. For this reason intemperance in the female, if it be not passing, will have in all cases exceptional gravity. The children of female drunkards, if they escape the morbid influences which compromise their existence in the womb of their mother or at birth, are often idiots, imbeciles, insane, or epileptic. These divers affections are the consequences of cerebral congestions, of hæmorrhages into the membranes or nervous substance, of encephalitis, of softening chronically, determined by the abuse of alcohol by the parent." Of all the manifestations of alcoholic heredity, epilepsy is believed to be the most important and the most common. Of 95 epileptics examined, M. A. Voisin found twelve who had scrofulous and true tubercular antecedents; 12 had ancestors who died from alcoholic excess, or were subject during their honeymoon to excessive abuse of alcohol. Marcet reports of a drunkard who had 16 children, that five were dead and the remainder epileptic. One, G., who was proved to have been in a state of constant drunkenness for some time, had a child born to him, who from its youngest infancy had convulsions, and is now a confirmed epileptic. We believe that convulsions in infancy are neither more nor less than incomplete signs of epilepsy, and that they predispose singularly to mental alienation. Van Swieten has said with reason that perhaps there is not a lunatic who has not had convulsions in his infancy.

One other accidental consequence of drunkenness is that it diminishes the elements of vitality in the child, so that it comes into the world with but half an existence, so that the least blast falling upon it will prevail.

That alcohol carries into the composition of the fecundating material modifications of which we are ignorant, must be admitted. In fine, we would point out hydrocephalus in the offspring following alcoholism or simple drunkenness in the parent. The children of drunkards are not all of necessity idiots, lunatics, or epileptics, but there are few that present nothing abnormal; and in those of seeming freedom the germ may be late in developing itself. It is not rare to find precocious cerebral excitement displaying itself most frequently in a good memory. They are parrot-like, and display a remarkable aptitude for some particular pursuit. It will, however, often be found that they do not fulfil the promise of their early years, seeming to have produced in their youth all of which their organization is capable. Some find their way early to the gaol, others are eccentric in all their ways and beliefs, and constitute the class of pretentious imbeciles. Nature would seem to have a horror of the anomalies and monstrosities that

alcoholism induces, so that it often rejects from the womb. Darwin tells us that the families of drunkards become extinct in the fourth generation, after having descended through the scale of physical and intellectual degeneration.

Dr. Taquet concludes by remarking that the children of drunken parents are more liable to attacks from prevailing epidemics and sink under them sooner than other people.

CHARLES ALDRIDGE, M.D.

## BARTENS ON RADIANT HEAT AS A CAUSE OF INSANITY.\*

EXCEPT by the old writers, who ascribed all kinds of brain-disease to the action of the sun's rays on the head, not many cases of psychoses caused by radiant heat have been recorded, and those mostly of short duration. Delacoux reports that, during the march of Marshal Bugeaud in Oran in 1838, under a hot sun, 200 men were taken ill with symptoms of brain-hyperæmia; of these 11 committed suicide in consequence of hallucinations. Barclay saw a case of melancholia following insolation in South Africa; the patient ultimately destroyed himself. Grisolle observed among sailors in the hot zones melancholia with strong tendency to suicide. Oberneier reports a case of insolation, in which great excitement, with marked hallucinations of sight and hearing, preceded death. Persistent weakness of memory, dulness of understanding, and various paralyses, have frequently been observed after *coup de soleil*.

Hardly anything is to be found in literature concerning the influence of the heat radiated from furnaces in large factories, etc., on the causation of insanity. The paucity of these cases may be partly due to the following causes:—when the heat becomes unbearable to any workman he can always escape into a cooler atmosphere, which under a tropical sun he could not do; the rays from a fire do not fall so directly upon the head as do those from the sun, but act mostly upon the anterior surface of the body and the face; lastly, stokers and others who work near large furnaces are habituated to very high temperatures, and that this affords very great immunity from any ill effects is shown by the rarity of insolation among natives of the tropics, as compared with foreigners from more temperate climates.

Cases have occurred of sudden illness resembling insolation, though really due to the heat of fire, which have ended in death, and in which the *post mortem* appearances, especially as regards the brain and its membranes, have been identical with those caused by sunstroke. The similarity of the influence of the sun's rays and of artificial heat on the brain and its membranes has been proved by experiment upon animals by Oberneier, Wood, and others.

Psychoses due to the action of radiant heat are really more frequent than has been hitherto believed. During the last few years there have been fourteen such cases in the asylum at Siegburg; six of these occurred in workmen exposed to excessive heat, and eight were due to insolation.

In two fatal cases, in one of which insanity was due to sunstroke, and in the other to the heat of a furnace, hæmatomas of old and recent date were found, together with cloudiness and thickening of the membranes, hyperæmia of the same, and oedema of

\* *Allgem. Zeitschrift für Psychiatrie*, Band 34, Heft 3.



the brain. In the latter of the two cases there were in addition granulations of the ependyma on the floor of the lateral and fourth ventricles, gray degeneration of the lateral columns, hyperæmic and greatly thickened membranes of the spinal cord.

Insanity due to insolation generally commences quite suddenly. Only in a few cases the patients apparently recover and resume their ordinary occupation, until, under some harmful influence, the disease again breaks out. In the case of stokers, feelings of weakness, fatigue, disinclination for work, pains in the head, etc., generally precede for a considerable time the outbreak of insanity. The patients become anxious and restless, believe themselves to be followed and mocked; sooner or later they become maniacal, destructive, and dirty in their habits. They are mostly also sexually excited, and masturbate shamelessly. In some cases the disease commences directly with psychic and motor excitement, and grandiose delusions are developed, such as are usually only observed in paralytics. The maniacal excitement, in a few cases, lasts only a short time, and melancholy with weariness of life predominates until the end of the disease. In other cases, however, mania with large delusions persists till death. All the patients are subject to frequently recurring attacks of congestion to the head; they constantly appear preoccupied, and even when most excited seem to be in a kind of dream.

In almost all cases paralytic symptoms appear early. The pupils are at first contracted, but later dilated and unequal; strabismus is frequent, and ptosis not uncommon. The tongue trembles when protruded, and inclines to one side or the other. The speech becomes stammering and the gait unsteady. In most cases the paralytic symptoms steadily progress; the intellect, especially the memory, fades rapidly, and the patients die, often in a very short time, of apoplexy or general paralysis. In the cases of recovery, the patients become gradually quieter, the paralytic symptoms disappear, and after a short stage of reaction, the patient gets well.

Here follow reports of all the fourteen cases observed by the author; in only three of them did hereditary disposition exist. Of the eight cases ascribed to insolation, five commenced quite suddenly, while those due to artificial heat were mostly preceded by prodromal symptoms. In nearly all the cases the insanity began with depression due to powerful hallucinations and delusions of persecution; after a variable period attacks of mania supervened; this last was accompanied in six of the cases by large delusions. All the cases except three presented paralytic symptoms soon after the outbreak of mental disease. These gradually disappeared as the intellect became clearer in the cases which recovered, but were progressive in the other cases.

Of the whole fourteen patients, five were discharged cured, two died, one is demented, three are still under treatment, and the remainder have been discharged as incurable. Of the five cases which recovered, two were ascribed to *coup de soleil*, and the other three occurred in workmen exposed to excessive artificial heat. It appears that three of the eight patients whose insanity followed insolation made attempts at suicide; whereas none of the fire-workers showed any suicidal tendency.

CHAS. S. W. COBBOLD, M.D.

## ZAUFAL, FRÄNKEL, AND OTHERS ON THE EFFECT OF THE NASAL DOUCHE ON THE EAR.

THE LONDON MEDICAL RECORD for May 1877, contains an abstract of a paper by Dr. A. H. Buck on the danger attending the introduction of fluids into the nasal passages. We now quote from the *Boston Medical and Surgical Journal* of Nov. 1, a summary of opinions on the same subject, drawn up by Dr. J. Orme Green. He says:—Inflammations of the middle ear, both catarrhal and purulent, have been frequently reported in the last few years as the direct result of the use of the nasal douche, and many unreported cases have occurred in the practice of those who see much of aural disease since the extensive use—and abuse—of Weber's apparatus. The reckless employment of the instrument without advice and with almost every imaginable fluid, and for any and every condition of the naso-pharyngeal cavity, including even fancied collections of dust, was undoubtedly the cause of some of the earlier accidents to the ear; but further experience has shown that even with all the cautions which the physician can give it will occasionally happen that any fluid introduced into the naso-pharyngeal cavity with force, be it by the douche, or the nasal or pharyngeal syringe, may find its way into the Eustachian tube, and set up an inflammation of the middle ear. To diminish the risk of this accident as far as possible the following cautions are now generally recognised as necessary to be observed with the use of either the douche or syringe. The water should be lukewarm, and contain a small quantity of salt, to make its specific gravity as nearly equal to that of the blood as possible; any great pressure should be avoided; the act of swallowing or any other movement of the pharyngeal muscles which tends to open the Eustachian tube should be carefully prevented by the patient; blowing of the nose and sneezing for some little time after the operation should also be avoided. In spite of these cautions, occasional accidents to the ear still occur, even when the physician himself has superintended the application of the fluid; and Buck has reported cases of inflammation of the middle ear from the simple snuffing up of salt-water into the nose, no syringe being used. The argument that has been used, namely, that the ear-disease, after the use of the fluid, is a mere coincidence and not the result of the operation, is sufficiently refuted by the clinical histories of many of the cases, for the passage of the liquid toward the ear is distinctly felt by the patient at the time, and is followed immediately by the pain which continues through the course of the disease.

These being the facts as learned by experience, some writers have urged that the use of fluids in any quantity in the naso-pharynx should be entirely discarded, and that the objects of cleansing the cavity and of making applications to it should be done by sponge or brush. Others, recognising the great value of douching for certain diseases, especially ozæna, are endeavouring to add to the cautions already observed such others as shall wholly prevent the possibility of the fluid reaching the ear. Zaufal (*Prager Med. Wochenschrift*, No. 16, 1876) considers the use of the douche as absolutely necessary in ozæna and certain ear-diseases dependent on disease of the nasal mucous membrane, and would prevent the entrance of fluid into the Eustachian tubes by a mechanical closure of those tubes. He has seen and demonstrated that pressure of the soft palate towards

the orifice of the tubes has the effect of raising the floor of the Eustachian tube so high that the tubal cartilage is pressed back and the floor of the tube is pressed against the cartilage hook, and the orifice is tightly closed. Accordingly, when he wishes to apply the douche he stands behind the patient, and with two fingers closes the tubes by firm pressure of the soft palate against them.

Fränkel (*Deutsches Zeitschrift für Praktische Medicin*, No. 30, 1877), while acknowledging the effectiveness of this expedient of Zaufal's, considers that it is not always, or even generally, applicable, but thinks that the same closure of the tubes can be produced by the phonation of the non-nasal vowels. His practice is as follows. Before using any applications he satisfies himself that both nostrils are free enough to allow the exit of fluid, and this is readily accomplished by closing first one nostril and then the other while he is listening to the breathing of the patient. Instead of a Weber's douche he uses the India-rubber bulb-syringe of Michel (the Davidson syringe would be a good substitute), which enables the patient to check the current when necessary. The patient is then directed before compressing the bulb, that is, beginning the douche, to pronounce the vowel oo, and to continue this phonation till after the douching is over, thus closing the palate against the posterior wall of the pharynx and the Eustachian tubes by contraction of the levator palati muscle. The advantage of this use of phonation over the former method of douching is that the naso-pharyngeal isthmus is already closed before the fluid enters the nose instead of closing by reflex irritation after the entrance of the fluid.

In addition to the cautions already given, these expedients of Zaufal and Fränkel can well be borne in mind in prescribing any form of douche, the former when the surgeon himself makes the application, the latter when it is entrusted to an intelligent patient. But unfortunately the intelligence of patients, in a surgical sense, cannot be depended upon, and the question whether the benefit from the douche more than counterbalances the slight risk to the ear must be left to the decision of the prescribing physician. Certainly the cases of ear-disease which have been reported should lead to a careful consideration of each individual nose, and should check the reckless and indiscriminate use of the douche.

#### RANKING ON THE HYPODERMIC ADMINISTRATION OF QUININE IN INTERMITTENT FEVER.

IN the *Indian Medical Gazette* for April 2nd Dr. G. Ranking (Indian Medical Department) gives his opinion in favour of this method of giving quinine. He has tried it in 200 cases, and, after comparison with results obtained by internal administration, concludes that, whilst equally effectual, the hypodermic method is more rapid and more economical.

An analysis of 24 mixed cases is given. Of this group five were very severe cases, with quotidian ague of long duration; of double type in three, with intense cachexia and prostration. One case, with severe paroxysms occurring regularly twice daily, and daily attacks of profuse epistaxis (the spleen being enlarged and indurated) was treated by 1.5 grains given twice daily for ten days, when the fever was checked.

The rest of the cases were strongly marked cases

of ague of too severe a type to be treated out of hospital, but yielding either to one or two injections.

The average number of grains used in the 24 cases mentioned was 5.23 grains. In one case it was 31 grains, and in another 12 grains. Many cases required only half a grain. If the drug be given in the ordinary way, Dr. Ranking considers that the amount required is never less than five times the above quantities.

The number of operations performed in all these cases averaged 3.08, giving an average of a little more than a grain at each injection. In two cases the number of operations was 24 and 20 respectively. In both of these the injection was given two and three times daily till the fever was quelled. An analysis of the results gives the following result:—

	AVERAGE.
1. Number of injections required to check the fever ... ..	3.08
2. Number of grains of quinine used in each case ... ..	3.23
3. Number of days after which the fever was stopped ... ..	2.58

The excess of days in hospital is to be explained partly by the time required to treat the prostration, anæmia, and other consequences of the severe fever, and partly by the delays before sick leave could be obtained. In no case was it due to the presence of inflammation, ulceration, or other sequela after the operation.

Dr. Ranking examines the objections usually advanced against this method: 1. The pain of the operation; 2. The tendency to ulcerative or inflammatory sequelæ; 3. The possibility of tetanus following it; 4. The difficulty of application.

1. Without denying that pain is an objection, Dr. Ranking remarks that: (a) The pain of a properly given injection is so slight that not even a native will object to its repetition; (b) Though sepoys complain at first, they soon give this up, especially if the medical officer do the injection himself; (c) In many cases in which he has given quinine hypodermically to grooms, table-servants, and others, by taking care to select the arm not generally used in work, they have been able to continue their work after an hour or two, being relieved from the intense prostration of an ague-fit at the expense of a trifling discomfort in the site of operation.

2. In 200 cases inflammation occurred very rarely, and ulceration never, although many of the cases were greatly prostrated by frequent accessions of fever, and in all stages and varieties of cachexia, "malarial" and syphilitic. Such inflammation as occurred was of only a few hours' duration, immediately yielding to a cold lotion.

3. Death from tetanus is reported in only one or two cases, and in these tetanus was at best doubtfully attributable to the operation.

Dr. Ranking used a solution of 48 grains of neutral sulphate of quinine in an ounce of warm water, one grain being contained in 10 minims. The dose usually given was half a grain = 5 minims. The solution should be made in small quantities, as it seems to undergo some alteration after keeping a few days, becoming yellow and discoloured. In performing the operation Dr. Ranking recommends the following precautions. 1. The syringe and solution should be warmed before use. 2. The most favourable situation, both for operation and subsequent observation, is the posterior lateral surface of the forearm on its radial side, about three inches above the sty-



loid process of the radius, thus avoiding, as far as possible, the larger branches of the cutaneous nerves. 3. The injection should be made *very slowly*, the forefinger of the left hand being used from time to time to distribute the fluid among the interstices of the cellular tissue, by rubbing it along the arm upwards for a few inches. This should be done so slowly and completely that no lump remains to mark the site of the operation. 4. After use, the syringe should be well washed with hot water, most carefully dried, and the screw part, if the common syringe be used, well oiled. In this way corrosion is delayed for a long time, and one great factor in the troublesome sequela of ulceration removed.

The solution is used warm for two reasons. 1. It causes less pain than a cold solution. 2. The quinine does not deposit itself so rapidly in the cellular tissue. If the solution be cold, or if it be hastily injected, either the syringe becomes clogged and refuses to act, or the quinine is deposited quickly before it has time to be absorbed, forming a solid mass in the cellular tissue. This, though retarding the beneficial effects of the injection, has never caused any untoward consequences.

[Two advantages at least are obvious, viz., the economy of the method, and its applicability under all conditions.—*Rep.*]

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## ANATOMY AND PHYSIOLOGY.

OERTMANN ON TISSUE-CHANGE IN BLOODLESS FROGS.—It is well known that a healthy and vigorous frog will live for days after the whole of its blood has been withdrawn from the vessels and replaced by a 0.75 per cent. solution of common salt. Oertmann has recently availed himself of this fact, in order to obtain a direct answer to the question, whether oxidation takes place in the blood, in the tissues, or in both together (Pflüger's *Archiv*, Band xv, Parts 8 and 9). He compares the amount of oxygen consumed and the amount of carbonic acid given off by normal frogs, with the corresponding values in the case of "salt" frogs. A series of comparative experiments, carried out with all needful precautions against error, showed conclusively that, in the frog, the processes of oxidation are in no way affected by complete removal of the blood, the tissue-change of the bloodless frog being maintained at the normal level. From this, it follows that oxidation must go on in the tissues, not in the blood. Of course the salt water cannot take the place of the blood for any length of time. The "salt" frogs only lived for a period varying from one to three days; but during the first ten or twenty hours of this period the energy of their metabolic processes was not in any degree reduced.

BERNSTEIN ON THE LAW REGULATING THE EXHAUSTION OF NERVE-FORCES, AND THEIR RECOVERY AFTER STIMULATION.—The phenomena of exhaustion and recovery have been thoroughly studied in tetanised muscles; Professor J. Bernstein has recently investigated the corresponding phenomena in motor and sensory nerves (Pflüger's *Archiv*, Band xv). If an interrupted current from a Dubois-Reymond's induction apparatus be sent through a short section of the exposed sciatic nerve in a frog,

the tendo Achillis having been previously connected with the lever of a myograph, it will be found, after a time, that stimulation of the plexus higher up no longer causes the muscles of the leg to contract. The conducting power of the stimulated tract of the nerve is abolished. With time and rest it may be regained; but its recovery does not take place at a uniform rate. At first it is very slow and gradual; it then goes on very rapidly for a relatively brief period; lastly, it enters on a third phase, during which its progress is once more slow, proceeding at a constantly diminishing rate as the nerve approaches its normal condition. The impairment of conductivity which results from the flow of a continued galvanic current through a given section of a motor-nerve has been ascribed to a variety of causes. It is really a kind of fatigue resembling that produced by interrupted currents. The process of recovery is governed by the same law in both cases; hence it may fairly be inferred that the fundamental changes in the nerve-fibre are similar in both. Bernstein next proceeded to investigate the phenomena of recovery in motor-nerves after their conducting power had been exhausted by mechanical, chemical (dilute lactic acid), and thermal stimuli. The rate of recovery was found to obey the same law as before. On extending the inquiry to sensory nerves the same law was again found to hold good. The author then proceeds to discuss the facts in their theoretical aspect, and points out that the law deduced from them is fundamentally similar to that which regulates the recovery of organisms as a whole from the exhaustion caused by fatigue or disease; it may thus be brought into connexion with the general principles of organic nutrition.

BÖHM AND HOFFMANN ON THE BEHAVIOUR OF GLYCOGEN WHEN INTRODUCED INTO THE CIRCULATION.—Existing statements on this subject are in conflict with one another. Pavy, for instance, found the injection of glycogen into the vessels of a living animal to be followed by the appearance of sugar in its blood, and—when the quantity injected was considerable—in its urine likewise. Schiff altogether failed to discover sugar either in the blood or in the urine. Böhm and Hoffmann (*Archiv für exper. Pathol. und Pharmacologie*, Band vii, and *Academy*) have investigated the matter afresh. They find that if from three to ten grammes of pure glycogen be introduced into the jugular vein of a cat, the urine is more copiously secreted, and assumes a reddish tinge, owing to the presence of dissolved hæmoglobin. It contains no red discs. Glycogen, therefore, resembles glycerin and many other substances in exerting a solvent action on the coloured elements of the blood. On examining the urine by the polariscope, and testing it with Fehling's solution, they found, to their surprise, that the indications furnished by the two methods did not agree, the former indicating the presence of from five to ten times as much sugar as the latter. Further inquiry showed that only a part of the glycogen is transformed into a compound able to reduce the copper solution—probably glucose; another part being converted into a carbo-hydrate, which agrees in all its properties with the achro-odextrin of Brücke and Nasse.

FUNKE AND LATSCHENBERGER ON THE CAUSE OF THE RESPIRATORY VARIATIONS OF BLOOD-PRESSURE IN THE AORTIC SYSTEM.—Funke and Latschenberger (Pflüger's *Archiv*, Band xv; abstract in *Academy*) call attention to the varying flow of

blood through the pulmonary capillaries, determined by the varying expansion of the lungs. Every inspiratory expansion of these organs, whether it be attended by a *plus* or *minus* degree of intrathoracic pressure, must, by stretching the walls of the air-cells, lengthen and narrow the individual capillaries and thus diminish their collective capacity. Conversely, the expiratory collapse of the air-cells must widen the capillaries and augment their capacity. These changes must influence, not merely the flow of blood between the two sides of the heart, but the tension in the aorta likewise. The primary effect of inspiration will be to raise the latter by squeezing the blood out of the lungs in the direction of least resistance—into the left auricle—and thus feeding the left ventricle with more blood. Its secondary effect will be to lower arterial tension by checking the current of blood through the lungs. Expiration will primarily lower arterial tension by lessening the supply of blood to the left auricle; its secondary effect will be to raise it by facilitating the flow through the pulmonary capillaries. These *à priori* considerations were put to the test of experiment, and a long account of the investigation is given. Its results confirmed the anticipations of the authors in every particular. They conclude that the essential cause of the respiratory variations of arterial pressure is always to be sought in the varying capacity of the pulmonary capillaries due to the alternate expansion and contraction of the lungs. In artificial, as in natural, breathing, the inspiratory rise of tension is owing to the blood being squeezed out of the lungs into the left heart; the expiratory fall, to the retention of blood in the dilated pulmonary capillaries. In natural breathing, the respiratory variations of intrathoracic pressure of course contribute—but only as accessory elements—to the general result; the same may be said of variations in the rate of the heart's action.

**POUCHET ON THE GENESIS OF RED BLOOD-CORPUSCLES.**—M. G. Pouchet has brought a communication on this subject before the Société de Biologie (*Gazette Méd. de Paris*, Nov. 17, 1877; and *Academy*, Dec. 8). He believes the most direct method of attacking the question to consist in an examination of the blood and the intimate structure of the spleen in the Selachian fishes. By following this plan he arrived at the conclusion that in *Scyllium catula*, and probably in some vertebrates, the blood invariably contains corpuscular elements which cannot be distinguished from those which make up the splenic parenchyma. These elements are smaller than ordinary leucocytes; they exhibit a pearly lustre by transmitted light; their surface presents smooth protrusions of sarcodic matter; they contain a voluminous nucleus which turns slightly brown under the influence of osmic acid. These elements pass, through a series of intermediate stages, into fully formed red corpuscles; they increase in size, lose their sarcodic properties to assume a regular figure, their nuclei shrink, and hæmoglobin appear in their interior.

**FRANCK ON THE RELATION OF CARDIAC RHYTHM TO ARTERIAL TENSION.**—M. François Franck (*Progrès Médical*) presented to the Société de Biologie a note of his experiments on this subject. If the head and trunk of an animal be so separated that they are only connected by the vagi, injection of warm defibrinated blood into the cerebral vessels retards the heart-beats; a similar effect may be produced by

even pressing the encephalon from without. If the cardiac muscles of a turtle be so divided that the organ is deprived of all active innervation, no variations in intracardiac pressure seem to affect the rhythm.  
ROBERT SAUNDBY, M.D.

## PATHOLOGY.

**MARTIN AND DECAISNE ON CARDIAC MALFORMATION.**—Two cases of congenital malformation of the heart were brought before the Société Anatomique in Paris on the 19th of July last.

Case 1 was reported by M. Hippolyte Martin. F. L., aged 12, was blue at his birth, and had always retained the same colour. He learnt to walk late, was always weak, easily caught cold, and was inapt at both bodily and mental exercises. A year ago he was treated at the Hôpital des Enfants Malades for white swelling of the knee, and left with the joint ankylosed; since then he had coughed, and presented symptoms of some pulmonary affection; he had become much thinner, but never had had hæmoptysis, and for the last eight or ten days he had kept his bed. On admission he appeared fairly developed, of middle size, fine skin, marked with freckles; but, above all, a general cyanotic tint; the child was everywhere and in every respect like a hanged person in the third period of asphyxia. His fingers were Hippocratic, and he showed a great tendency to sleep. On auscultating the heart, there was nothing to be heard at the apex; at the base, on the contrary, there was a pronounced murmur with the first-sound, heard at its maximum in the second left intercostal space, opposite the sternum. Percussion demonstrated slight hypertrophy of the organ; the apex-beat was a little external to the nipple in the sixth intercostal space. The lungs were consolidated and breaking down at both apices; the other organs presented nothing remarkable. The pulse was small, frequent, but regular, 110 per min.; the temperature in the rectum was 37° Cent. (98.6° Fahr.). He died soon afterwards, and the *post mortem* examination showed the following condition of the heart. There were only three cavities, that is to say, the ventricle was single. An incision made at the apex opened a large ventricular cavity; it was shaped like a curvilinear triangle. A tricuspid valve, very well shaped, had its segments attached to the three sides of this triangle, and corresponded to a large opening leading into the left auricle, which was normal. The right auricle also appeared normal externally, receiving the venæ cavæ, the Eustachian valve being unusually well developed; but in place of the proper auriculo-ventricular opening there was a long narrow canal, which seemed to glide into the posterior wall of the single ventricle, to open fifteen millimetres above the apex. This orifice was hidden by two voluminous papillary muscles of the second order, and was only discovered by passing a probe from the auricle. There was no valve in the whole length of this canal. At the base of the ventricular cone, the aorta and pulmonary artery opened side by side. A fleshy horizontal pillar, which passed from the ventricular wall to the tricuspid valve, and seemed to strengthen the insertion of the right segment of this valve, converted the part of the ventricle from which these two main trunks arose into a sort of diverticulum. The aorta was anterior, and was normally developed. The pulmonary artery was immediately behind the aorta; its diameter was diminished



to the size of a large crow-quill; the boundary of its ventricular orifice was white, dense, and resisted the scalpel; before opening the vessel no valves could be seen, but on slitting it up *two* semilunar valves were found situated higher up, and of larger size than normal; they appeared quite competent. The foramen ovale was still patent, admitting a catheter. The auricular walls were not thickened; those of the ventricle were of the normal thickness of a left ventricle.

Case 2 was reported by M. Gaston Decaisne. D., aged 26 months, was admitted with the simple statement that for the last two days she had vomited, and had diarrhoea, which symptoms did not persist after admission. She had no fever, ate and slept well, and nothing revealed at a first glance any morbid condition. Examination of all the organs gave positive signs only in the heart; in fact, a systolic murmur occupied the whole præcordia, extending to the right side, and heard even posteriorly; its maximum intensity was at the base of the heart, and at the middle of this viscus; there was also considerable impulse with "frémissement cataire"; the pulse was 102, regular, not intermittent. The cardiac dullness was not notably augmented. Death occurred with symptoms of pulmonary congestion. The necropsy showed the following state of the heart. There was no hypertrophy of the organ; the aorta and pulmonary artery were dilated, but their valves were healthy, as were also the mitral and tricuspid valves. The ventricular walls were not altered. At the superior part of the ventricular septum, beneath the mitral valve, there was an orifice which established a communication between the two ventricles. On the left side the orifice was elongated and sinous; on the right side it was round and prominent; the endocardium at this part was white, thick, and opaque; the foramen ovale was closed. It is notable that there was no cyanosis in this case.

UHTHOFF ON THE PATHOLOGY OF NEPHRITIS.—W. Uhthoff (*Centralblatt für die Medicin. Wissenschaften*, Nov. 3), working under Leyden's guidance, has endeavoured to investigate the effect of multiple embolism of the renal arteries by injecting quicksilver. He introduced a fine catheter into the femoral artery, and passed it up to the opening of the renal artery, and poured in mercury. The results were embola of the stomach (simple ulcer) intestine, liver, spleen, and spinal cord (paraplegia); in three cases pure kidney injection; these were studied clinically and anatomically. The subjects of these experiments were a dog, which was killed three days, and another, which was killed seventeen days, and a rabbit, which was killed five weeks after the operation. The urine contained blood, cylinders, much epithelium, lymph-corpuscles, amorphous and crystalline (bilirubin) blood-colouring matter, much albumen and indican: in short, it presented all the phenomena of the different stages of nephritis. Anatomically, the great vascular system of the cortex of the kidney was found filled with mercury, the veins were distended with blood, and there were many hæmorrhages. The immediate neighbourhood of the embolon showed a great accumulation of round cells, with granular or colloid metamorphosis of the tubules. Later on a small abscess was formed, which frequently contained pure mercury in its centre. In the periphery, cicatricial contraction occurred. The glomeruli showed in the fresh state four distinct

anomalies; 1, in consequence of the round cell infiltration, anæmia from compression; 2, marked enlarged and glassy swelling, in the parts remote from the embolon; 3, collateral hyperæmia and extravasation in the capsules; and, 4, accumulation of an apparently exudative homogeneous material between the capsule and the capillary loops. The end of these changes was necrosis and contraction, which showed itself at the conclusion of the other inflammatory processes, as granular atrophy in the kidneys of the rabbit killed after five weeks.

THOMA ON THE STATE OF THE RENAL VESSELS IN GRANULAR KIDNEY.—Dr. Richard Thoma (*Virchow's Archiv*, Sept. and Oct.) has communicated a series of observations on this subject. His first experiments were directed to ascertain the permeability of the renal vessels under constant pressure, comparing the results in diseased and healthy organs, under equal conditions of age. He found that the actual quantity transmissible in a given time, and the proportion of the outflow through the renal vein to the quantity injected into the artery, were both much diminished in the diseased organs. His next inquiries were towards establishing a standard of normal weight for the kidney, and the construction of tables, showing the due relation of the influence of age on this point; also, by careful measurements of the sectional areas of the renal artery and its branches, he succeeded in finding the normal relation between these areas and the size of the organ. On applying these data to determine the changes which take place in disease, he found that the renal artery, though actually slightly smaller, is relatively from one-fifth to twice as large. The interlobular arteries, measured midway between the cones and the capsule, and near the capsule, are absolutely larger, as are also the vasa afferentia and the glomeruli themselves. By other experiments, he found that the rapidity of the flow of fluid in the renal artery of diseased kidneys was not half, often not a fourth, of what it is in healthy organs. The injection of coloured solutions proved that the blood-vessels of diseased kidneys are abnormally permeable, permitting the passage of not only fluid, but gelatine, Prussian blue, chloride of sodium, and even solid grains of cinnabar, without rupture of their coats. The same injections also demonstrated a great reduction in the capillary network, the vasa afferentia often anastomosed directly with the efferent vessels. In spite of the endarteritis, as a rule the lumina of the vessels were not less than normal.

METTENHEIMER ON A CASE OF ECHINOCOCCUS OF THE HEART.—C. Mettenheimer (*Betz's Memorialien*, xxii Jahrgang, 8 Heft) publishes a case of which we give the following abstract.

S., aged 35, a soldier, was admitted into hospital during the Franco-German war with pneumonia, from which he recovered; he afterwards showed symptoms of cerebral mischief, epileptic convulsions and mania; no note was made of anything abnormal about the heart. He died, and *post mortem* examination showed the following conditions in the heart. There was adipose development in the course of the coronary arteries; both cavities of the heart were empty. In the muscular wall of the left ventricle there was a cyst as large as a pea, containing gelatinous matter enclosing an echinococcus; more careful research discovered two more in the same locality, and one in a trabecula of

the right ventricle. Minute investigation failed to find any in the other organs. These hydatids were not acephalocysts; hooklets and suckers were easily demonstrated. R. SAUNDBY, M.D.

LUYS ON THE PATHOLOGICAL ANATOMY OF GENERAL PARALYSIS OF THE INSANE.—M. Luys read a paper on this subject before the Société Médico-Psychologique, and illustrated it with a large number of photographs of microscopic sections (*Annales Médico-Psychologiques*, July 1877). The magnifying power varied from 15 to 600 diameters, and the morbid processes thus shown tended to support the view held by many pathologists, that general paralysis is a true diffuse interstitial sclerosis of the neuroglia of the nervous centres.

One series of preparations demonstrated the unequal action of the hyperplastic process. As M. Baillarger observed formerly, in certain subjects it is the white substance which is first attacked; in these cases the fibrillæ of the neuroglia, with their contained corpuscles, are very notably increased: these last are swollen, and have an increased number of radiating processes, which are also swollen; and thus a new closely matted tissue is formed, which, by its invading action, destroys the nerve-fibres amongst which it is placed, until a sclerose tissue, having in places an areolar appearance, completely replaces the true nerve-element. M. Luys showed a section in which this disposition was very evident, where it was seen that, at the junction of the white with the grey substance, the cerebral matter was pierced by a series of holes, giving to the section the appearance of a coarse net formed of sclerose tissue, and in the cortical structure the pathological element was found to have the same character. M. Luys drew attention to the fact that the superficial regions of the cortex resembled in a manner a true epidermis, formed by a delicate finely fibrillar structure, whose meshes are crossed in many directions, constituting a neuroglia cushion placed between the meninges and the superficial layer of the cortex. This zone of connective tissue, which in the normal state is formed mainly by the corpuscles of the neuroglia, and by the fibres which emanate from the vascular sheaths, becomes the seat of a true neoplastic proliferation, which doubles its thickness, and increases infinitely the number of its elements. In sections taken from cases which have died from some cause or other at an early period of the disease, the multiplication and swelling of the connective tissue corpuscles are seen. They behave here in the same manner as they are seen to do in the white substance, their thickened prolongations forming trabecular tracts and radiations of all kinds, constituting a trellis-work of new formation, more or less condensed, and having an invading character. Again if, by the aid of fine sections, we follow the continuity of this sclerose tissue in its connection with the various subjacent zones of the cortex, we find the same process going on, and that this invading tissue by its pressure is capable of destroying the true nerve-elements. M. Luys showed two preparations where the normal state and the morbid process could be seen side by side, and pointed out that the sclerose network of the white substance, that of the submeningeal region of the cortex, and also the various zones of the cortex, demonstrated a continuity of the same sclerose process, obeying everywhere the same laws of evolution. He also drew attention to the increase of the con-

nective tissue corpuscles in the grey matter, and to the manner in which they formed circles round the true nerve-cells, and by their concentration gradually destroyed and caused the absorption of the true nerve-elements.

In another preparation, M. Luys was able to show how the invasion of this sclerose tissue is fatal to the nerve-cells, so that at an advanced period of the disease the nerve-cells are seen only as whitish masses of pyramidal form, disposed in a series devoid of any morphological character, and seemingly dried up.

Having established these facts, M. Luys expressed his belief that the lesions in general paralysis are clearly characterised by a general hyperplasia of the wof of the neuroglia, which develops to infinity, and thus creates a condition precisely similar to that found in cirrhosis of the liver. These lesions seem to start from different points indifferently, sometimes commencing in the white substance, sometimes in the cortex, and sometimes in the submeningeal regions of the spinal marrow; and for this reason it is that general paralysis may assume different forms at its commencement, the mental or motor symptoms being most marked as the higher or lower centres are first attacked.

M. Luys showed also that, where the nerve-tissue is affected, its vascular elements are also deeply involved. The outer coat of the vessels will often be found in a state of connective tissue proliferation, and this outer coat is thus seen to be the true point of origin of tracts of sclerose tissue. Again, this development of connective tissue about the vessels constricts their calibre, and limits more or less completely the flow of the blood through them. Again, in other cases the vessels seem, by the same cause, to be dilated in a fusiform or moniliform manner from the unequal action of the new growth about their walls, presenting a similar character to the dilatation of the biliary canals observed in cirrhosis of the liver, and due to the same retractile property of the newly formed sclerose tissue. M. Luys believes that these observations, which are in harmony with those of Westphal, Lubimoff, Hayem, Magan, etc., are destined to throw an important light upon the knowledge of general paralysis, and to explain the common origin of its various clinical forms. He thinks that we shall see that the morbid process is essentially of an invading character—how it may develop itself in isolated or simultaneous action in different parts of the cerebro-spinal system—how the phenomena of vascular irrigation are modified by mechanical disturbances, caused by the growth of the sclerose tissue, which is the essence of the morbid process—how the active specific element, the nerve-cells, come to be invested, blocked into isolated groups, and are placed *hors de service*; finally, how the progressive dementia is the necessary result of a destroying lesion.

CHARLES ALDRIDGE, M.D.

#### RECENT PAPERS.

- General Pathological Anatomy of the Pulmonary Epithelium. By M. Charcot. (*Le Progrès Médical*, Nos. 25, 27, 31, 44, 46, 1877.)  
The Pathology of Albuminuria. By Dr. W. Runeberg. (*Nordiskt Medicin. Arkiv*, Band ix.)  
On Epithelial Visceral Cirrhoses in General. By M. Charcot. (*Le Progrès Médical*, Dec. 22.)  
Hints on Morbid Histology. By Dr. Robert Saundby. (*Birmingham Medical Review*, Jan. 1878.)  
Obesity; its Etiological and Pathogenic Conditions. By Dr. E. Lancereaux. (*L'Union Médicale*, Dec. 6.)  
The Pathology of Hydrophobia. By Dr. W. B. Cheadle. (*Medical Times and Gazette*, Dec. 15.)



## MEDICINE.

HENSGEN ON THE SYMPTOMS AND DIAGNOSIS OF INTESTINAL OBSTRUCTIONS—CASE OF CARCINOMA OF THE COLON.—Dr. Hensgen, writing in the *Deutsche Medicinische Wochenschrift* for December 8, remarks that very various views have been held regarding the group of affections comprehended under the general term ileus. Regarded at first in the days of Hippocrates as a diseased condition of the intestine through metastasis of various humours, or of a *materia febrilis* or of intestinal gaseous accumulations, later observers disregarded the bearing of the pathological processes, and held ileus to be the product of the "molus antiperistalticus", of a primary inflammation, of a reversal of peristaltic action, thus confounding cause and effect. With the sounder pathological observations of the present century, ileus came to be a designation merely for stercoraceous vomiting, or for an intestinal obstruction, with, of course, faecal vomiting. But it is erroneous to assume that obstruction is always accompanied by faecal vomiting. This is impossible in occlusion of the upper portions of the small intestine, nor has it been confirmed in all cases of closure of the large intestine. From this point of view the following unusual case is of interest. A woman, aged 56, had long suffered from cutting pains deep in the abdomen, pain and straining with defæcation, the stools often mucous and mixed with blood. At first, constipation varied with diarrhoea, when she often passed yellow purulent masses, mixed with sago-like granules; but in later years constipation became more persistent, often accompanied by nausea, necessitating the use of the enema; by which small, hard, and rounded faecal masses, resembling sheep's dung, were evacuated. In the end of December 1876, the abdominal pain grew worse, and the intestines were frequently largely distended by gases. At times a loud noise, like an explosion, could be heard all over her room, caused probably by the peristaltic contractions overcoming partial constrictions of the intestine, and allowing the accumulated gases to escape onwards. At the same time the lower bowel continued absolutely closed. This state of things continued for 5½ weeks, during which time there was complete closure of the bowel, and also an entire absence of any escape of the intestinal contents upwards, either faecal or even of gas having a faecal odour. On the 4th February the patient died with the usual signs of intestinal perforation. The necropsy showed the abdomen full of fluid and semifluid faecal matter. The large intestine was found enormously distended, while the small intestine was not only not distended, but rather somewhat contracted. The descending colon was found completely closed to an extent of 10 c. (3.94 inches) by an irregular, hard, nodulated mass, which proved to be a carcinomatous growth. The ileo-cæcal valve was unaltered. In the belief that there was a cicatricial constriction of the intestine, and probably an accumulation of hardened faeces, the treatment consisted of injections of water by means of the enema-syringe, but it was found impossible to inject any considerable quantity, and the water was at once forcibly expelled by the bowel. Nor was it possible to determine the seat of the obstruction by the capacity of the bowel for water, as suggested by Brinton (*On Intestinal Obstruction*, 1867); and indeed this capacity was found very variable. Subsequently, by means of a long tube, Dr. Hensgen succeeded in carrying an injection

of water high up the bowel, without, however, coming upon any obstruction, but also without bringing away a trace of faecal matter. The introduction of this tube (a perforated bougie) was much facilitated by keeping up a continuous stream of water through it while passing it up the bowel. The most striking feature of this case was the long duration of complete closure, namely, forty-four days (the usual period being six to thirteen days), during which time certainly nothing whatever passed through the bowel. The absence of faecal vomiting must be regarded as due to the action of the ileo-cæcal valve, which also sufficiently accounts for the non-distension of the small intestine. The diagnosis of intestinal obstruction is one of the most difficult. In general it must be borne in mind that the symptoms may sometimes point to the existence of obstruction, when, in fact, there is none at all, as, for instance, in some forms of colic, in cases of renal calculi, of acute peritonitis, or acute typhlitis. The history of the case and an accurate physical examination alone can establish the diagnosis. The usual seats of herniæ should be examined, so also the uterus, and rectum, the latter by finger and the sound. The outline of the intestines and the extent of distension will often indicate the probable seat of the obstruction. Regard should also be had to the age of the patient, for intussusception is relatively frequent in early years, while in later years carcinomatous growths more generally produce bowel obstructions. But even the existence of carcinoma can only be established by the discovery of an abdominal tumour. When this fails, the diagnosis, as in the present case, must always remain uncertain.

SCHREIBER ON OCCIPITAL NEURALGIA.—In view of the statements of Erb and Hasse, that little or nothing is known of vaso-motor and trophic disturbances in connection with occipital neuralgia, the following case is of interest. It occurred in Dr. Naunyn's practice in the clinic of the University of Heidelberg, and is reported in the *Berliner Medicinische Wochenschrift*, Dec. 10, by Dr. Julius Schreiber, Assistant-Physician.

F. P., a mechanic, aged 49, of healthy parents, had suffered severely from intermittent fever within the last 20 years, from which even now he is not quite free. His present illness commenced in the spring of 1872 with severe pains at the back of the head. They lasted three months, and then were removed under medical treatment. After an interval of two years, they recurred in the manner here described. He was a well-built, well-nourished man, and his affection was only indicated by the head held inclined forward in an anxiously constrained manner. The head was large and symmetrical, with abundant growth of hair, the face was red, the conjunctivæ were injected, and there was a copious secretion of tears. Pressure on the forehead and intra-orbital region was painless, but the scalp, and especially the occiput, was extremely tender. In this region intense pain had existed for four weeks, which appeared to follow the course of the great occipital nerves, and was severest at the vertex, where in a space of about a hand-breadth there was acute sensibility to the slightest touch. The pain was paroxysmal, commencing every morning exactly at 6 and 9 o'clock, lasting each time from 15 to 30 minutes, and was always ushered in by repeated sneezing, with increased mucous secretion in both nostrils. When the pain had lasted some time, stiffness of the neck

supervened, rendering all lateral movement impossible. But the patient was able to incline the head forward, by which the pain was considerably lessened. It was found that he could also incline the head backwards; this, however, at first increased the pain until a certain point of reclamation had been reached, after which a further bending backwards was attended by the same relief as in inclination forwards. Towards the end of each paroxysm there was repeated hiccup; after which there was ease for the rest of the day. He was ordered a daily dose of 1 gramme (=  $15\frac{1}{2}$  grains) of sulphate of quinine. With each dose the attacks diminished, and after the third dose there came on only the usual sneezing and hiccup, but no pain. After a complete cessation of six weeks, the disorder returned. One gramme of quinine was ordered to be taken at 4 a.m. and 3 p.m.; and when four grammes had been taken, the attacks ceased. He took daily, for a fortnight more, half a gramme of quinine, and has been well since. This was a clear case of double intermittent occipital neuralgia. The accompanying vaso-motor phenomena of sneezing, injection of the conjunctiva, lachrymation, and increased nasal secretion are generally found only in neuralgia of the fifth nerve (trifacial, trigeminus). In the present case they point to a close relation of the occipital and trigeminal nerves. This connection was indicated by Lambert (*London Med. Gazette*, vol. xxvii, p. 918), who was about to divide the facial nerve in a case of prosopalgia (tic douloureux). On cutting down behind the lobe of the ear, he came upon the great auricular nerve, which, when touched, threw the affected facial nerves into a state of tension. On dividing it the tic was cured. The pain in trigeminal neuralgia is, further, sometimes found to radiate along the course of the occipital nerve. The hiccup may be regarded as due to irritation of the vagus, reflected from the occipital nerve (Pflüger, *On the Sensory Functions of the Spinal Cord*, 1853). Though the rigidly erect position of the neck is regarded usually as almost pathognomonic of occipital neuralgia, yet the present patient constantly held his head inclined forward, and carefully avoided raising it. It would seem that, so long as the inclination of the head, forward or backward, is occasioned only by the weight of the head, it is not only possible, but productive of ease, whereas any further inclination, or a raising movement, increases the pain, by throwing into action those muscles of the neck whose nerves are implicated in occipital neuralgia.

ZENCKER ON A CASE OF CARDIAC NEUROSIS.—In a paper entitled "Clinical Contribution to the Neuroses of the Heart," published in the *Berliner Klinische Wochenschrift* for November 27, Dr. E. Zencker relates the following case.

P., a labourer, æt. 22, was admitted to hospital on July 27, 1876, with symptoms of extensive œdema of the lungs, and enormously increased action of the heart. The respirations were 56, pulse 208, with great orthopnoea and restlessness; the sensorium was not impaired. He stated that on the 24th and 25th July he had been seized with several violent attacks of palpitation of the heart, from which he had in previous years suffered twice. Percussion showed that the limits of the heart were considerably extended. The grave pulmonary œdema was at once treated after the manner of Traube with dry cupping, sinapisms and acetate of lead in doses of nearly a grain every half-hour, also an ounce of infusion of valerian, every hour. After five hours the œdema began to

diminish, and the acetate was given only every hour, and subsequently every two and three hours. The pulse and respiration remained the same.

On the 28th the patient showed intense cyanosis, and great orthopnoea; the pulse was small, and could only be counted at the heart. There was extensive cardiac dulness towards both sides; the sounds could not be distinguished, and the lungs showed on the right side some remains of œdema. The sputum was scanty and rusty.

On the 29th the œdema had disappeared,  $31\frac{1}{2}$  grains of acetate of lead having been taken in all; otherwise he was the same. In the afternoon the pulse rose to 220 regular beats in the minute, respiration being 52.

On the 30th the temperature was  $36.8^{\circ}$  cent. ( $98.24^{\circ}$  Fahr.): pulse 204, resp. 44. He passed 1200 cubic centimetres of urine of sp. gr. 1017; no albumen. His general condition was the same; the pulse was scarcely perceptible. Musk was ordered to be given every three hours in three-grain doses. The bowels were freely moved after about an ounce of infusion of senna; the stools contained blood and much mucus. At night a subcutaneous injection of hydrochlorate of morphia (0.12 grain) was given, with manifest relief to the patient, who towards morning fell into a sound sleep till 9 a.m.

On the 31st the pulse was 92, respirations 28, temperature  $37.5^{\circ}$  cent. ( $99.5^{\circ}$  Fahr.). The skin was moist and deep red in the face and about the ears; the senses were clear; there was no cyanosis; the pupils were contracted; the pulse was full and bounding. The left cardiac region of the thorax protruded more than the right; at the systole the thoracic wall about the apex beat was strongly thrust forward; the apex beat lay in the fifth intercostal space, about 1.2 inches outside the nipple, and extending over a space of 1.2 inches; absolute dulness from the third to the sixth rib, and from the sternum to 1.2 inches outside the nipple. At the apex was heard a prolonged rough systolic murmur, which was cut short by the diastole; this was continued to the second intercostal space on the left side, where the diastolic sound was strong, and accompanied by a loud diastolic murmur. At the insertion of the fourth rib on the left side there was a systolic murmur, and an indistinct diastolic sound; on the right side, about the third rib, a systolic and faint diastolic murmur. The musk and valerian were discontinued, and a dose of castor-oil was given.

August 1. Pulse 84, temperature  $37.3^{\circ}$ , resp. 20; he was very somnolent; the bowels were freely opened; the stools contained chiefly mucus, accompanied by great tenesmus.

August 2nd. Temperature  $36.9^{\circ}$  c.; pulse 76; respiration 20. There were moderate facial cyanosis, continuous drowsiness and impaired sensorium. At the apex of the heart was heard a systolic and diastolic murmur; at the left margin of the sternum, about the fourth costal cartilage, a systolic sound and a weak diastolic murmur; at the right third costal cartilage a loud diastolic murmur, prolonged to the systole, which is also heard over the pulmonary artery with a strongly pronounced second sound. The double murmur was heard in the carotid, and the systolic sound in the femoral artery during expiration. In the afternoon the patient was suddenly seized with violent palpitations. At 6 p.m., after vomiting some dark brown matter, the heart beats numbered 204, without the least irregularity; respiration 36; cyanosis moderate. A subcutaneous injection of morphia (0.09 grain), and infusion of valerian were



given, an hour after which free perspiration set in, and the pulse fell to 140.

August 3rd. He passed a good night, but vomited violently in the morning. Pulse 180; respiration 28. After a further, but ineffectual, injection of morphia (0.12 grains), he was ordered camphor and valerian.

August 4. Temperature,  $36.7^{\circ}$  c.; pulse, 188; resp. 28. There were great stupor and restlessness; the pupils were dilated; he had marked cyanosis. At 10.45 a.m. 0.15 grain of morphia was injected, and the patient became quiet; the pupils contracted and cardiac action diminished, so that at 5 p.m. the face was bright red, the pulse 96 and steady. He continued thus until 1 p.m. of the 6th August, when, while raising himself in bed, another violent attack of palpitation set in. Within half an hour the pulse rose to 218; the lips and cheeks were cyanotic; pupils very dilated, acting sluggishly; pulse scarcely to be felt; general and increasing stupor. Musk was first given, and then a subcutaneous injection of morphia, which, however, proved insufficient.

August 7. There was cyanosis; the pulse was much the same; hence a further injection of 0.18 grains of muriate of morphia was given at 10 a.m., and in consequence the pulse gradually sank, very irregularly, in five hours to 170; the pupils contracted; the cyanosis diminished; the skin became moist. At 4.30 p.m. a further injection of 0.9 grain of morphia was given, and by 6 p.m. the pulse fell to 92-106; the face became deep red, the pupils were much contracted, and the body covered with profuse perspiration. During the next two days continued in a more satisfactory condition, the pulse varying from 84 to 64. Infusion of digitalis (1 in 50) was now substituted for valerian, and half an ounce was given every three hours. In the night from the 9th to the 10th, after a change of position, when the bowels were moved, a renewed acceleration of the heart's action set in.

August 10. Pulse, 176; respiration, 28. At 11.30 a.m., 0.15 grain of muriate of morphia was injected, and repeated five hours later. Profuse perspiration set in during the night. The next morning the pulse had fallen to 84, respiration 22. But at 2 p.m. of the same day—the 11th—a further exacerbation set in, which was the severest of all, and lasted seven days. During this period the pulse fluctuated from 168 to 200; the respirations at one time attained a maximum of 140 per minute; the urine contained traces of albumen, and a few hyaline casts. The treatment consisted of repeated injections of morphia up to 0.225 grain, of sinapisms, dry cupping, musk, valerian, for which was afterwards substituted infusion of digitalis (0.5 to 150). On the 17th the pulse suddenly fell from 188 in the morning to 88 at 10 a.m.; pupils again contracted; the face and neck reddened, especially on the left side. The next day an abundant herpetic eruption appeared on the right underlip. The pulse fell to 76, and respiration to 20 in the minute. The attacks of palpitation recurred, with less severity, on several subsequent occasions, and were mostly occasioned by changes of posture, evacuation of the bowels, or attempts at percussion of the cardiac regions. The heart-contractions manifested at these times a marked irregularity, and were of a double type, reminding one of the “alternating pulse” (pulsus bigeminus). The injections of morphia were continued (up to 0.24 grains) from time to time, each time affording relief. On the 22nd August the apex-beat lay in the fifth intercostal space, towards the median line, and at each systole

the thoracic wall was thrust forward, the elevation extending to four tenths of an inch to the right of the median line about the fourth intercostal space. At the apex, besides a muffled sound, was heard a loud systolic murmur; over the sternum and to the right of it up to the third rib was audible a loud diastolic murmur, which was also heard on the pulmonary artery along with the marked diastolic sound. On September 2nd the cardiac dulness scarcely extended to the left of the nipple, and the apex-beat lay in the fifth intercostal space. The last attack, a very evanescent one, occurred on September 8th. By degrees the patient was accustomed to movements and moderate activity, and his condition improved, so that at the end of September he was discharged well. From the patient's account of his previous history it appears that the first attack of palpitation and dyspnoea occurred about three years previously, when, while straining to lift a heavy weight he suddenly fell down unconscious, after which he had similar attacks from time to time, caused by hard work and raising and moving heavy weights. At the same time, through inability to work, he was much reduced in circumstances.

A review of the case precludes the idea of its being due to the aortic insufficiency, and also excludes it from the category of “the weakened heart” of English authors. Nor is it of the nature of angina pectoris, owing to the complete absence of pain. It is rather a hyperkinesis, for the functional action of the heart is unimpaired between the attacks, during which attacks, however, the contractions are greatly increased in number. The facts of the case, the high rate of the pulse, the striking regularity of the heart's beat, appear to point at first sight to a paralysis of the inhibitory centre of the heart as the cause of the several attacks. And yet the real cause of the affection would seem rather to lie in a stimulation of the excitatory cardiac centres. For in opposition to an excessive excitation of the motor centres, the inhibitory action may be overcome or exhausted, but not yet paralysed. We find marked irregularity of the heart's action after the continued use of digitalis, indicating unmistakably an increase in the inhibitory power. This effect of digitalis was counteracted again by the subsequent well-known primary stimulating effect of morphia injected subcutaneously. An almost conclusive argument is furnished by the effect of the vibration and shock of percussion, which on two occasions threw the heart from a state of quiescence into one of exaggerated action.

As to the cause of the increased stimulation of the excitatory cardiac nerve centres; we must look for it in the increased demands upon an already overtaxed muscle, and in the insufficient nutrition.

Notwithstanding the difficulty of determining the influence of treatment on an affection which always tends to terminate spontaneously, we cannot apparently deny the influence of morphia on the course of the several paroxysms. In six of these paroxysms, morphia injected subcutaneously sufficed to produce ease, contraction of the pupil, and a gradual diminution of the pulse to its normal frequency. But on two occasions, and when morphia was not employed at all, the pulse abruptly fell from a considerable height to the normal condition. Traube observed in the second stage of opium narcotism contraction of the pupils and diminution of the frequency of the pulse in consequence of the abnormal stimulation of the regulating cardiac nerve centres. According to Gschleiden a moderate dose of morphia is attended at first

with diminution of the pulse, followed by an increase and then again by a reduction. Hence we conclude that the pulse-reducing effect of morphia was the result of general bodily repose and consequent absence of all pressure on the aortic system, combined with its influence on the controlling nervous system of the heart. Fresh exciting impulses being thus cut short, and with increasing powers of resistance, the paroxysms terminated.

**MARCHAND ON PECULIAR BRANCHED FORMATIONS IN THE EVACUATIONS.**—In the *Berliner Klin. Wochenschrift* of November 20, Dr. Marchand, of Halle, describes some branched coagula which were sent for examination. They had been passed *per anum* by a healthy woman after confinement. They resembled fibrinous casts of bronchi, but were larger, the main stem being of the size of the little finger. From this stem proceeded numerous branches, presenting an almost dendritic ramification. The smaller branches, which appeared to proceed from the main stem, proved to be glued to it by the copious intestinal mucus, and consisted of a firm substance similar to coagulated fibrin, but presented no appearance of organised tissue. Analogous formations were shown by Dr. Loewe at a meeting of the Medical Society of Berlin, in March 1876, and were found in the fæces of a healthy woman; and recently, precisely similar excreta were sent to Dr. Marchand, which came from a healthy woman on the ninth day after delivery. These proved to be, instead of tube-casts, nothing more than inspissated intestinal mucus. Exactly similar formations were found in the folds of the large empty intestine of a man who died after amputation. The following is their mode of formation. After prolonged inaction of the bowel, it is empty, containing perhaps only a few hardened bits of fæces. These are covered by tough mucus. In the folds of the bowel they become moulded, and assume the form of branchings, and are expelled the next time the bowel is emptied, with its fluid secretions. Hence their occurrence after confinements.

**KLINGELHOEFFER ON THE ETIOLOGY OF EPIDEMIC CATARRHAL JAUNDICE.**—Dr. Klingelhoef (Berliner Klinische Wochenschrift, Nov. 26) cannot confirm the opinion of Dr. Köhnhorn, that the cause of epidemic jaundice lies in too great sameness of diet. He observed an epidemic of icterus from Oct. 1874 to March 1875 among a population of all classes, whose diet was in no way other than usual, and therefore the cause must be looked for elsewhere.

W. J. TREUTLER, M.B.

**KÖBNER ON SPINAL HEMIPLEGIA.**—Köbner (*Deutsches Archiv für Klin. Medicin*, Band xix, and *Centralblatt für die Medicin Wochenschriften*, Nov. 3) reports two cases of spinal hemiplegia. The first was the case of a man aged 28, the subject of secondary syphilis, in whom lumbar pain was soon followed by paralysis of the right leg and loss of sensibility in the left. In the right leg sensation was preserved, but for a time it, as well as the reflex excitability, were increased, the temperature was lowered, the muscular sense preserved. In the left leg motion was normal; but sensibility showed a peculiar partial diminution, for although tactile sensibility, the senses of weight and of space, were intact, sensibility to pain and temperature were lost. There were also present the sensations of a half girdle, and disturbances of the vesical, rectal, and genital functions. By the presence of other decided

syphilitic phenomena and the improvement of all the symptoms by the inunction cure, no doubt remained of the case being a right-sided syphilitic affection of the spinal cord opposite the lumbar enlargement. The second case was that of a woman aged 31, whose history included syphilis. There were present paralysis of the left lower extremity, with normal cutaneous sensibility, sometimes heightened; sensation of passive movements was abolished. The motor functions of the right leg were not quite intact, but it was not much stronger than the left, and sensibility to touch, pain, and temperature was abolished, although the perception of passive movements remained. In this case the lesion, at least at the commencement of the disease, must have been limited to the left half of the cord.

**RIEGEL ON THE DIAGNOSIS OF EXTRAPERICARDIAL ADHESIONS.**—Dr. Franz Riegel (*Berl. Klin. Wochenschrift*, Nov. 5) points out what he considers an interesting diagnostic sign of adhesions between the pericardium and the border of one or other or both lungs; this is, enfeeblement of the heart's impulse during expiration. He says that much attention has been paid to the influence of the respiratory phenomena upon the pulse and the tension of the arteries, but little to its influence upon the cardiac movements themselves; but it is easy to observe that under normal conditions the impulse is stronger during respiration and feebler during inspiration, which is easily accounted for by the changes in the position of the diaphragm and the anterior border of the lungs. But when adhesions have taken place between the pericardium and the edge of a lung, the reverse of the above occurs, as the lung on retraction pulls upon the pericardium and impedes the heart. He demonstrates this by cardiographic tracings of the apex beat in two of his cases, where after death these adhesions were found.

R. SAUNDBY, M.D.

**GIBSON ON THE AURICULAR IMPULSE.**—Dr. G. A. Gibson has a paper on this subject in the *Edinburgh Medical Journal* for October 1877. It is intended as a sequel to one by Dr. Balfour in the *Lancet* on the so-called hæmic murmur; and his object is to illustrate by cardiographic tracings certain cases in which an impulse was observed over the situation of the left auricle, viz., in the second left intercostal space. His chief inference is that in no inconsiderable number of cases of heart-disease the wave of regurgitation into the auricle, allowed by the incompetency of the mitral valve, is of such magnitude as to give both tactile and instrumental manifestations of its presence. His first tracing shows a simple systolic wave caused by the distension of the left auricle on regurgitation through the mitral orifice. It was developed during an attack of acute rheumatism, and was attended by a systolic bellows-murmur over the mitral and tricuspid areas. In his 2nd case there was an auricular pulsation in the second interspace, which followed "in order of sequence" a loud and blowing systolic murmur heard over the mitral and tricuspid areas. This case he regards as one of auricular dilatation from loss of blood. In his third case he refers the pulsation in the second left interspace to dilatation of the auricle, a sequel to vascular obstruction caused by general arterial atherosclerosis. A harsh systolic murmur was heard over the whole præcordia, but was loudest over the seat of the auricular impulse.

I. BURNEY YEO, M.D.



**GALLARD ON ALCOHOLIC GASTRITIS IN WOMEN.**—In a lecture by M. Gallard, published in his recent volume, *Clinique Médicale de La Pitié*, he treats of alcoholic gastritis, especially in reference to women. In the female sex habits of drunkenness often show themselves, or become exaggerated, at the period of the menopause, which is a truly critical age with regard to drunkenness. M. Gallard cites the case of a woman who showed the most characteristic symptoms of drunkenness without ever having been given to drink; but, for two months before she came under notice, had acquired the habit of taking a few drops of sulphuric ether on a piece of sugar. This fact confirms the doctrines concerning the similarity of action between alcohol, chloroform, and ether. Changes in the stomach are the first observed in chronic alcoholism, and then there supervene changes in the liver and kidneys, which are extremely like those observed in syphilis. As a prophylactic in treatment of alcoholism, M. Gallard, following the example of Magnus Huss, administers the empyreumatic oil to which corn and potato brandies owe their special flavour, and which is known by the name of *fermentoleum solani*. From four and a half to nine doses of it may be given in drops of from three-quarters to one and a half drops, either in draughts or in pills, three or four times a day. The therapeutic treatment consists in narcotics, especially opium, alkaline drinks, and hydrotherapy.

**GALLARD ON WRITER'S CRAMP.**—M. Gallard, in his recent volume, *Clinique Médicale de la Pitié*, has come to the conclusion that writer's cramp is certainly a professional disease, but a clinical study of it decidedly shows that it is far from being special to persons who write much. Absolutely similar disturbances are seen in persons who follow other avocations, such as engravers, artificial flower makers, pianists, violinists, telegraphists who use the house-telegraph, etc. But in all these persons the disturbances observed occur in the hands and fingers. Absolutely similar, nay, identical disturbances are observed in persons following professions which exercise other muscles than those of the fore-arm or hand; and then these disturbances occur in the muscles which are necessarily contracted by the habitual exercise of the avocation, whether these muscles be those of the arm, shoulder, leg, neck, face, or even the trunk. The analysis of these various facts leads the writer to the first conclusion, that the disease in question is not peculiar to writers; the analysis of the symptoms leads him to another conclusion, that it is not a cramp; whence he feels the necessity of substituting for the incorrect denomination writer's cramp, the far more suitable name proposed by Dr. Duchenne of Boulogne—viz., functional impotence. In reference to establishing the nature of this morbid condition, M. Gallard, after having proved that it evades any anatomical localisation whatever, is led to admit that it is a simple functional disturbance and nothing else. He is particularly struck by finding, with regard to its etiology, that fatigue is far from being an essential cause of it; for this disease does not occur in those who work in a certain way, when the intelligence, otherwise occupied, does not exercise a sufficiently attentive supervision over the muscular movements. This is because there is at that time a veritable discordance between the cerebral acts and the movements, which are performed in a thoroughly automatic manner, that the muscles become fatigued, and finish by performing disordinate movements, that they may be con-

sidered as being in an ataxic condition. It is very singular to see a trouble so essentially nervous constitute a morbid functional state which is almost incurable; and M. Gallard in vain seeks the reason of this peculiarity in certain diathetic influences, which he most carefully studies, and which he endeavours to make the basis of a rational treatment. But he is obliged to acknowledge the small efficacy of all the medical means he has successively employed, including electricity; and, tired of the struggle, is reduced to advise prophetic apparatus, in which he does not seem to have much more confidence, although he describes them with great minuteness.

**HOLDEN ON ERRORS OF THE SPHYGMOGRAPH.**—In the *New York Medical Journal* for November, Dr. Edgar Holden draws attention to some of the most frequent causes of error occurring in the use of the sphygmograph. He classifies errors into those of comparison, of observation, and of interpretation. Errors of the first class may arise from comparison of records taken by different instruments, or at different degrees of pressure, or upon different arteries, or at different rates of speed, and may be so great as to vitiate the importance of the observation. Errors of the second class include those arising from carelessness, or from want of proper appreciation of purely physiological causes, as full meals, fatigue, etc. Errors of interpretation occur when peculiarities of a tracing are not attributed to their proper causes. "A singular and not easily explained error may arise where aortic regurgitation exists. When the heart, under the stimulus of the regurgitant flow, has come into a state of hyperexcitation, the tracing, before exhibiting unmistakable evidence of regurgitation, gives the low, flat-topped record of high arterial tension, the sudden drop of arterial collapse having disappeared. In such a case, proper adaptation of pressure can alone give a correct record." He concludes with the following summary.

1. In all tracings published, the reader should be informed of the prominent features of the case, if one of disease, and if one of supposed health, of the condition as regards meals, exercise, habits, and temperament.
2. The degree of pressure should be stated.
3. The instrument used, and the rate of speed, with the number of pulsations by actual count, should be given, as well also as the name of the artery tried.
4. The greatest care should be exercised, not only to obtain a perfect record, but the particular record which, after several efforts at different pressures, is found to be the true exponent of the condition.

#### RECENT PAPERS.

- On Gingivitis. By M. E. Magitot. (*Gazette des Hôpitaux*, Nov. 24.)  
 On Contagion in Common Pharyngitis and in Diphtheritic Pharyngitis. By M. Bouchut. (*Ibid.*, Nov. 27.)  
 Two Cases of Cerebral Rheumatism successfully treated by Cold Baths. By M. Langlebert. (*La France Médicale*, Nov. 24.)  
 The Treatment of Epilepsy. By M. Hardy. (*Gaz. des Hôpitaux*, Nov. 22.)  
 Senile Diarrhoea. By M. Potain. (*Ibid.*, Nov. 29.)  
 Pericarditis with Effusion and Old Adhesions, Paracentesis of the Pericardium, Sudden Death. By Dr. Widal. (*L'Union Médicale*, Nov. 24.)  
 A Case of Prolonged Syncope, with Cerebral Disturbance, treated by Nitrite of Amyl. By Dr. W. O'Neill. (*The Practitioner*, Dec. 1.)  
 On Dyspepsia. By Dr. Lauder Brunton. (*Ibid.*)  
 On Sleeplessness and its Treatment. By Dr. W. Ainslie Hollis. (*Ibid.*)  
 Note on Two Cases of Pectehial Rheumatism. By Dr. Gibert. (*Revue Mensuelle de Médecine et de Chirurgie*, Nov. 1877.)  
 Note on a Case of Aneurism of the Arch of the Aorta, treated by Electro-Puncture. (*L'Union Médicale*, Nov. 20.)  
 Pleural Effusion, its Diagnosis and Treatment. By Dr. John Haddon. (*Edinburgh Medical Journal*, Nov. 1877.)

Blennorrhagic Endocarditis. By M. Desnos. (*Gaz. des Hôpitaux*, Nov. 20.)  
 Two Cases of Perihepatic Abscess bursting through the Right Lung. By Dr. A. T. H. Waters. (*British Medical Journal*, Nov. 24.)  
 On Bronchiectasis. By Dr. Headlam Greenhow. (*Lancet*, Nov. 24.)  
 On Bronchiectasis. By Dr. E. Baulenhaver. (*Berliner Klinische Wochenschrift*, Dec. 24.)  
 A Contribution to the Symptomatology of Uræmia. By Dr. P. Michelson. (*Ibid.*, Dec. 31.)  
 A Contribution to the Study of Progressive Pernicious Anæmia. By Dr. S. T. Sørensen. (*Nordiskt Medicin. Arkiv*, Band ix, Häft 4.)  
 On an Early Symptom of Tabis Dorsales. By Dr. Westphal. (*Berliner Klinische Wochenschrift*, Jan. 7.)  
 Reversed Writing (*Spiegelschrift*—Mirror-Writing) in Diseases of the Brain. By Dr. Buchwald. (*Ibid.*)  
 On Thoracentesis by Aspiration in Acute Pleurisy. By M. Dieulafoy. (*Paris Médical*, Dec. 26.)  
 The Use of Alcohol in the Treatment of Disease. By Dr. James Russell. (*The Birmingham Medical Review*, 1878.)  
 Contribution to the study of Anomalies of Sclerosis in disseminated Patches. By Dr. Pitres. (*Revue Mensuelle de Médecine et de Chirurgie*, Dec. 1877.)  
 Note on Glosso-Labial Cerebral Paralysis of Pseudo-Bulbar Form. By H. Lepine. (*Ibid.*)  
 Hydrophobia. By M. Lasègue. (*Gazette des Hôpitaux*, Dec. 20.)  
 Palustral Myocarditis and Puerperal Myocarditis. By Dr. Garcia. (*Ibid.*)  
 Aneurism of the Aorta opening into the Pulmonary Artery; Aortitis probably of Syphilitic Origin. By Dr. Laveran. (*L'Union Médicale*, Dec. 20.)  
 On the Diagnosis of Meningitis by the Ophthalmoscope. By M. Bouchut. (*Gazette des Hôpitaux*, Dec. 14.)  
 On the Refrigerating Method in Relation to General Pathology. By Dr. Maurice Raynaud. (*L'Union Médicale*, Dec. 11.)  
 Paralysis of the Third Pair of Nerves, from Compression by a Specific Tumour. By M. Hardy. (*Gazette des Hôpitaux*, Dec. 6.)  
 On some Modifications in the Sphygmograph, and its Use as a Cardiograph. By P. N. Labatut. (*L'Union Médicale*, Dec. 6.)  
 Treatment of Neuronal Affections of the Heart. By Dr. Milner Fothergill. (*Lancet*, Dec. 15.)

## SURGERY.

VERNEUIL ON THE PATHOGENESIS OF GENU VALGUM.—In a paper recently read before the Société de Chirurgie in Paris (*L'Union Médicale*), M. Verneuil rejects the theories of the muscular and ligamentous origin of genu valgum, which do not appear well founded. While admitting that there is still considerable obscurity about the question, he adopts the osseous theory, basing his conclusions upon personal observation. This is the view held by many distinguished authors, who only differ in assigning the deformity, some to hypertrophy of the internal condyle, others to atrophy of the external.

M. Verneuil is disposed to accept the doctrine of the deformity being caused by hypertrophy of the internal condyle of the femur, as put forward by MM. Ollier and Tripièr, who attribute genu valgum to abnormal activity of the epiphysary cartilage of the lower end of the femur. These authors, experimenting on animals, have been able at will to provoke hypertrophy of the internal condyle by exciting the internal half of the epiphysary cartilage, and of the external condyle, by irritation of the external half.

Although M. Verneuil has not had an opportunity of verifying clinically M. Ollier's theory concerning the two halves of the cartilage, he has, however, been able to observe some facts for himself, which confirm in a general way the principle upon which it is based.

THOMAS ON TWO NEW SUTURES.—Two new forms of suture are suggested by Dr. H. L. Thomas of Richmond (*American Journal of Medical Science*, October 1877); they appear to offer peculiar advantages in certain cases, entitling them to fair trial.

They are specially adapted for deep incisions and lacerations, such as those affecting the female perinæum. In some such cases, owing to the great

tension and softening of the parts, little more is effected by all ordinary sutures than a puckering of the edges of the wound, the latter being drawn down to the base, which is its most unyielding part. To avoid this, by rendering the walls of the wound as unyielding as possible, Dr. Thomas proposes his cannula suture. His second or figure-of-eight suture has for its object the reduction of the depth of the portion of the wound included in the wire.

1. For the *cannula suture* a number of small steel cannulæ are required, large enough to allow a strong wire to pass freely through them, and long enough to reach the bottom of the wound, where they should be slightly curved. The surface end of each should have a shoulder, to which the wire may be secured. The desired number of sutures being introduced in the usual way, a cannula is passed over each end of the wire, pushed home to the bottom of the wound, and then secured by a twist of the wire over its shoulder. When all the wires are thus treated, the sides of the wound are brought into contact by drawing the heads of each pair of cannulæ together with a thread, and so fixing them.

It is alleged of this suture that the tension of the parts may be controlled by loosening or tightening the thread over the shoulders of the cannulæ, while the wire, passing between the buried ends of the latter, allows their free motion, like a hinge. At the same time, the walls of the wound are kept firm and unpunctured.

2. *Figure-of-Eight Suture*.—This is made by passing a spiral needle into the right face of the wound at half its depth, through the bottom in the usual way, and out on its left face at a corresponding height. The needle is then threaded with the left hand of the suture, carried through the puncture already made on the right face of the wound, and so to the surface. The right hand end of the wire is similarly used on the left side. The edges of the wound being now approximated, and the wires secured, the operation is finished. The crossing of the wires at mid-depth of the wound lessens the amount of strain on the included tissues by one-half.

ASCHENBORN ON A FOREIGN BODY IN THE CESOPHAGUS, WITH PERFORATION OF THE AORTA.—Dr. Aschenborn relates the following case in the *Berliner Klinische Wochenschrift* for December 10th. V., a joiner's apprentice, was admitted to the Bethany Hospital on July 1st, 1876. That morning he felt severe pains during respiration, but had two days before begun to suffer from pains in the epigastric region and along the gullet after swallowing a hard morsel of bread. On admission, there were accelerated costal and shallow respiration, a full pulse of 100, a temperature of 39.0° Cent. (102.2° Fahr.). The heart and lungs were normal. There was acute sensibility to pressure at the pit of the stomach and about the insertion of the diaphragm, but no difficulty of swallowing. During the next six days the pulse rose at times to 120, with febrile symptoms, and deglutition became extremely painful, except in the case of fluids. The respirations rose to 40 per minute, and were throughout costal and shallow, the area of cardiac dulness was extended. The neck swelled in the supraclavicular spaces, especially on the right side. On the 5th a longitudinal incision was made in the posterior wall of the pharynx, yielding an offensive sanious fluid of a dark colour, but no pus. After this, his general condition improved somewhat, but the swelling of the neck was not diminished. On the 7th, in the



forenoon, two bloody stools were suddenly passed, his strength and general condition remaining unchanged for that and the following day. During the night of the 8th-9th July a copious stool of pure blood was passed, followed quickly by collapse. Under the use of port wine and camphor, the patient rallied somewhat during the day; but on the same evening, without any warning, immense hæmorrhage occurred from the mouth, and he succumbed in a few minutes. The necropsy revealed a longitudinal rent of two-fifths of an inch in the œsophagus, about four inches above the cardia, at right angles to which was found a needle about two inches long, piercing both walls of the descending aorta from before backwards. Both punctures were covered by small, firmly adherent blood-clots. The surrounding tissue, from the œsophageal to the posterior pharyngeal wall above, was infiltrated with sanguineous ichor. In the œsophagus were found large blood clots, the stomach was completely filled with a large coagulum of blood, and the whole intestinal canal contained large masses of clotted blood.

The needle, which was swallowed with the bread, became fixed in the œsophagus, and caused the moderate pain of the first few days. By repeated acts of swallowing it was made to penetrate the aorta; hence the bleeding on the 7th. The clots then formed served for a couple of days to plug the punctures; but when they became decomposed under the influence of the food taken, there resulted further and fatal hæmorrhage.

V. J. TREUTLER, M.B.

**KOESTER ON ULCERS FROM THE USE OF ENEMATA.**—Professor Koester of Cologne has an article on this subject in the (*Correspondenzblatt der Arzt. Vereine von Rheinland*, No. 20, 1877). There is not unfrequently found in the rectum an ulcer (hitherto observed only by Recklinghausen), differing in its appearance and its constant situation from all other known ulcers of the intestinal tract. It varies in size, is usually round, frequently penetrating the intestinal wall like a funnel in a direction from below upwards, and from without outwards; there is little or no inflammatory proliferation of the base and edges. It is always situated in the anterior wall of the rectum, generally about two inches—never less than one nor more than three inches—above the anus. Sometimes only the mucous membrane is ulcerated and undermined; sometimes the entire wall of the rectum is destroyed; and in some cases there is suppuration of the pelvic connective tissue. In many cases, fatal peritonitis may be produced by perforation of such an ulcer; and even puerperal peritonitis has had its origin in rectal ulcer.

The form and situation of the ulcer indicate that it is of traumatic origin—being, in fact, caused by the somewhat unskilful use of the enema-syringe. In many cases the correctness of this supposition may be confirmed by inquiry. At the part in question, the rectal folds of mucous membrane and the thickness of the intestinal wall, and in front the prostate or uterus, and in puerperal women the head of the child, present a resistance to the horizontal passage of the pipe. This resistance of the mucous membrane is overcome by thrusting it aside; but, in doing this, there is risk of wounding it with the point of the syringe, and of infiltrating the submucous or circumrectal cellular tissue with the injection.

The author finally shows that, according to the researches of Ribes, and the observations of more modern surgeons, the opening of internal canal

fistulæ corresponds with the situation of clysmatic ulcers in that the latter are never found in the posterior wall, nor more than three inches above the anus. Hence it is probable that a large number of fistulæ of the rectum owe their origin to the enema-pipe.

**BARD ON SPONTANEOUS PERFORATION OF THE POPLITEAL ARTERY IN A CASE OF WHITE SWELLING.**—Dr. Bard, of Lyons, records an instance of this rare lesion in the *Gazette des Hôpitaux*, 1877. The patient was a scrofulous boy, aged 9, who had cold abscesses, and a suppurating white swelling of the right knee. The disease of the knee was of two years' duration; and, when the patient was admitted to hospital, consisted of a large tumour covered with cicatrices belonging to fistulous openings. The leg was bent nearly at a right angle; the muscles were contracted, and movement was painful. During the patient's stay in hospital, fresh abscesses opened, especially on the posterior part of the joint. Drainage was applied across a large purulent deposit in the popliteal space; about thirty days afterwards, spontaneous hæmorrhage occurred, but ceased of itself. Next day, after a paroxysm of cough and straining at stool, it returned, and was arrested by the application of Esmarch's bandage. It did not again recur; but the child died, and at the necropsy there was found at the anterior part of the popliteal artery (where the drainage-tube could not have reached it) a circular opening about one-twelfth of an inch in diameter: its edges were dented and torn, and presented no trace of inflammatory or reparative action.

A. HENRY, M.D.

**WINTERNITZ ON THE COLD-SOUND (PSYCHROPHOR).**—Dr. Winternitz, of Vienna (*Berliner Klin. Wochenschrift*, July 9), has designed an instrument, by means of which he secures the advantages of mechanical irritation of the urethral mucous membrane by the metallic sound, combined with the anæsthetic and tonic influence of cold. It consists of a double-current catheter without eyes, the two canals communicating with one another near the point of the instrument. The instrument is introduced into the urethra until its point has passed the prostatic portion, and it is then attached by india-rubber tubing to a reservoir containing water at the desired temperature. On turning a stop-cock, the water flows into one canal and out through the other, whence it is conducted away by another piece of tubing. In this way the caput gallinaginis and the entire urethral mucous membrane are exposed to the mechanical action of pressure, and to the sedative action of cold. The success obtained by Dr. Winternitz, by the use of this instrument, was so encouraging from the very beginning, that he has employed it constantly for over a year.

He has treated with it twenty two cases of pollution. Of these two did not return after the first application; one was improved at first, but soon became as bad as before, and the treatment was discontinued after the cold-sound had been used sixty-five times; twelve are still under observation, and have been somewhat improved by the treatment, that the pollutions occur very rarely, and the secondary symptoms, hypochondria, etc., have entirely disappeared. In three cases the improvement was marked, when the patients withdrew from observation; in two others the pollutions became less frequent, but the secondary symptoms remained unchanged. The two remaining cases are described in detail. In one,

the patient was a Russian officer, forty-six years of age, and the affection was due to excessive venery. The pollutions occurred regularly in the night after coitus, and recurred two or three times a week, when the patient was continent. The cold-sound was used daily for ten minutes with water at 59° F.; during its employment the patient experienced a sensation of pleasant coolness, and the relaxed scrotum contracted energetically. Some difficulty was experienced in removing the instrument. During the four weeks that the treatment was continued, there was only one pollution. The erections became more complete. In the second case the pollutions were frequent, and there were symptoms of excessive spinal irritation. The first introduction of the instrument caused great pain, and brought on an hysterical fit, but these symptoms disappeared after the water (59° F.) had flowed through the sound for five minutes. The treatment was continued daily for three weeks, when the patient was discharged cured. He had not had a single pollution from the time the treatment was begun.

At the first sitting Dr. Winternitz sometimes uses water at a temperature of 64° or even 66° F., and at a later period sometimes goes as low as 54½° F. Besides the above, he has treated nine cases of spermatorrhœa with the cold-sound. In four of these cases he obtained very favourable results; two cases were very markedly improved, while in the other three the treatment was without special results. In the cases of spermatorrhœa as well as in those of pollution, in which the treatment proved successful, general relaxation of the genitals, and loss of muscular tone in the scrotum were marked symptoms. The cold-sound was also used in five cases of too rapid ejaculation during coitus, and in two cases of obstinate chronic gonorrhœa. In the former its use was followed by at least temporary improvement, and both of the latter, one of which had lasted three years and the other six months, were cured.

**MOULARD ON AN APPARATUS FOR TRANSVERSE FRACTURES OF THE PATELLA.**—Moulard describes in a thesis (1877) an apparatus invented by Dr. Duploux for transverse fracture of the patella, and of which he has seen the good effects at the Rochefort Hospital.

The description of this apparatus is as follows. Dr. Duploux, chief surgeon to the Navy, employs small bands covered with collodion as a means of holding the fragments together in fractures of the patella. He envelops the lower segment of the limb with a silicated bandage, reaching half way up the thigh, but open in front and at the sides of the knee. This bandage is applied over a thick layer of cotton-wadding. Below the popliteal space he places a padded wood splint, which reaches half way up the thigh, and descends half way down the leg. When the silicated bandage is completely dry, he brings the fragments of the patella together in the following way. Threads of knitting cotton, each about twelve inches long, are placed in juxtaposition in a sufficient quantity to form a bundle four-tenths of an inch in diameter. He immerses the middle portion only of this bundle in collodion; then he arranges an upper bundle, of which the whole is applied four-fifths of an inch above the upper semi-circumference of the patella, forming a concentric curve around it as far as the level of the transverse diameter of the bone; a lower bundle is arranged in the same way at the lower part of the patella. Thus the two bundles are inclined the one towards the other, and the

patella is completely surrounded. Several layers of collodion are then applied with a brush over the maintaining bundles and the skin above and below. The apparatus being thus arranged, the collodion is allowed to dry completely, and the free tails are brought together and tied two and two on each side of the patella. In proportion as the distance between the two fragments is lessened, the ends are drawn closer. Care must be taken to add every day fresh layers of collodion above and below, to maintain the solidity of the apparatus.

**WYETH AND WARDWELL ON THE SURGICAL ANATOMY OF THE OBTURATOR ARTERY.**—Dr. John A. Wyeth and Mr. William L. Wardwell (*New York Medical Record*, October 1, 1877) make the following deductions from an analysis of twenty-seven consecutive dissections of the arteries in the male and twenty-six in the female pelvis. 1. Anatomists giving the origin of the obturator artery from the posterior trunk of the internal iliac are positively wrong, the vessel not originating from this point in more than ten per cent. 2. In females, it will be derived from the deep epigastric in one of two or two-and-a-half cases. 3. In males, it will be from the deep epigastric in one of four or six cases. 4. The obturator vein is found to enter into the external iliac or epigastric vein in a much greater proportion of cases than the artery is found to originate from the epigastric or external iliac. 5. The advice to "feel for the pulsation of this artery before cutting Gimbernat's ligament" (as is frequently given) seems unnecessary, since the insertion of the finger through the constricted canal, completely filled by the intestine, that has for this reason become strangulated, is impossible until after the section is made. 6. Although the conditions in which the obturator artery is found to the inner side of a femoral hernia rarely exist, the operation should be made with every regard to this abnormal arrangement.

**MCGRAW ON REPEATED EXCISION OF THE INFERIOR DENTAL AND GUSTATORY NERVES FOR THE CURE OF DENTAL NEURALGIA.**—In a paper read before the Detroit Medical and Library Association, Dr. McGraw relates the following case (*Detroit Medical Journal*, November 1877): The patient suffered from neuralgia of the lower jaw, on the left side. In February 1873, Prof. Gross, of Philadelphia, trephined the horizontal portion of the bone and destroyed the nerve. This gave relief for over a year, when the pain returned in the jaw, and made its appearance, for the first time, in the tongue. In June 1875, Dr. McGraw trephined the ramus of the jaw, and excised about half an inch of the inferior dental and gustatory nerves. After this operation pain remained absent for fourteen months, when it again returned. Acting on the suggestion of Richet, Dr. McGraw then divided the auriculo-temporal nerve, without any effect on the neuralgia. Shortly afterwards he performed the operation recommended by Prof. Gross, and removed the whole of the alveolar process of the left side of lower jaw, with a similar result. Believing that the nerves had become regenerated, he determined to divide them nearer their origins, and to tear them loose from their connections, as is frequently done with such success in neuralgias of traumatic origin. Accordingly, on September 28, 1876, the nerves were laid bare and carefully examined, but without finding any break in their continuity at the seat of the former operation. Powerful traction was then applied in the endeavour



to loosen them from their attachments, but in vain, and it was found necessary to cut them, about three-quarters of an inch being removed from each. The wound healed rapidly by granulation, and up to this time there has been no return of the neuralgia.

DE RENZI ON THE TREATMENT OF TETANUS BY REST.—Professor H. de Renzi, of Genoa, (*Gazette Médical de Paris*, No. 32, 1877), in a letter to Professor Botkin, says that in many cases it appeared to him that rest alone was the only means by which the terrible sufferings could be relieved. He relates how, by a series of observations, he was led to perfect this method of treatment by rest, and to accomplish cures which previously he could not obtain with the most powerful remedies. In one case of tetanus, which died in spite of large doses of chloral, the effects of light were observed; the number and intensity of the attacks were almost doubled when the patient, previously kept in darkness, was exposed to light. The approximate proportion of paroxysms was ten in darkness, eighteen in full light. He instituted numerous investigations concerning the strychnine tetanus of frogs, which closely resembles idiopathic and traumatic tetanus, and found the following results. 1. Tetanus is more intense in the frogs when placed in full light than in those kept in darkness. 2. The spasms develop with greater rapidity and intensity in animals which are agitated incessantly than in those which are kept quiet. The influence of mechanical stimulus is much more marked when aided by light. 3. Small frogs poisoned with one-twentieth of a milligramme of strychnia die soon if they are struck briskly, but may survive if left in perfect repose. Two cases of tetanus in man were treated in 1873; the first was treated with successive doses of chloral and repeated injections of curare, and died; the second, treated almost exclusively by rest, recovered. Of three other cases treated in 1874 on the same plan, only one died. Since then he further notes three recoveries out of four cases. A case which recovered was one of strychnine tetanus, in which every attack produced symptoms of asphyxia. Another recovered case, with intense symptoms, had followed amputation of the little finger after injury. The third case was one of idiopathic tetanus following fever. The death of the fourth case is attributed by the author to the fact that in his absence the patient had not been kept completely isolated. In one of the three first cases the patient, who had bronchitis, was taken with great difficulty in expectoration and intense dyspnoea. The author thought that the absorption of oxygen and elimination of carbonic acid were impeded by the profound darkness of the room—according to Pettenkofer, whose experiments have proved that light facilitates the two acts of respiration. Accordingly, as soon as the patient was found to be out of danger, light was occasionally admitted into the room, and it was ascertained that then the number of respirations per minute was greater than when darkness prevailed. The author summarises his plan of treatment as follows:—1. Placing the patient in a room perfectly dark, the door being opened only every four hours to bring and remove necessary articles; 2. Obliterating the auditory canal with wax, and advising the patient to keep as quiet as possible; 3. Administration of beef-tea, an egg, and two table-spoonfuls of wine every hour; 4. Belladonna and ergot for the relief of pain; 5. The floor should be carpeted.

REID ON A NEW METHOD OF TRACHEOTOMY SPECIALLY APPLICABLE IN YOUNG CHILDREN.—Dr. J. J. Reid, of this city, advises the following method of operating (*New York Medical Journal*, July 1877). After the usual incision of the skin, and the division of the strong superficial fascia which connects the sterno-hyoid muscles, the knife is laid aside, and the next part of the operation performed by two uterine tenacula. With these the deep layers of fascia are torn and the thyroid veins are pulled aside, until the trachea is sufficiently exposed. The tenacula are then inserted into the sides of the trachea, and slight traction is made, while the tube is laid open to the desired extent with a bistoury. The wound in the trachea is thus made to gape widely, and any pieces of membrane can be removed and the tracheotomy tube easily introduced. The advantages claimed for this method of operating are that it reduces to a minimum the risk of hæmorrhage, serves to fix the trachea without the danger of compression of the trachea and larynx, and facilitates the introduction of the tube.

ERWIN ON SUBMUCOUS LIGATURE OF HÆMORRHOID.—In a short paper in the *New York Medical Record* for December 22, Dr. R. W. Erwin suggests submucous ligature in external hæmorrhoidal tumours having a covering of skin, or skin and mucous membrane. The procedure causes very little pain during the operation or subsequently. As a rule, no anæsthetic is required, nor is it necessary to put the patient to bed afterwards, or shut him in the house in ordinary cases.

The operation is performed as follows. The best time is the morning, just after evacuation of the bowels, which may be assisted by compound liquorice powder taken the night before, or an enema previously. The motion of the bowels will generally from the straining bring down the tumours. After washing, the patient is ready, and may be put in the usual position. The tumours should not be seized with forceps or hook, as it causes pain and irritation. Take a straight needle, or one with moderate curve at point, armed with a small, lightly twisted waxed thread. With or without forceps, pass it through the mucous tissue near the base of the pile, and carry the needle around beneath the mucous membrane and out at the point of entrance. Tie it sufficiently tight to arrest the circulation, leaving a half-inch or inch of one end of the ligature. It will often be found advisable to carry the needle out through the mucous membrane at one or more points in making the circuit, but care should be observed to enter again at the place of exit. A little castor-oil or cosmoline may be applied over the parts and the whole returned. The effect of the operation is to cut off the vascular supply to the tumour, causing it to shrink away. The ligature comes away without trouble. Should the hæmorrhoid puff up or become very dark after ligature, incise it a little with the scalpel, thus relieving the congestion. Operate upon the largest first. If the patient remain about home, two may be tied at the same time; otherwise one, unless small. After removing one or two of the largest, the smaller often disappear. The bowels are to be kept soft with the liquorice powder, if necessary—not used as cathartic. For cleansing, a little warm castile soap-suds may be employed. In cases with heat and inflammation, the first effort should be to reduce it. If there be disturbance of the secretions or hepatic derangement, preface the operation a few days before with a mild corrective. Dr. Erwin

does not claim originality in this method of treatment.

MORRIS ON DIVISION OF THE TENDO ACHILLIS IN FRACTURE OF THE LOWER END OF THE FEMUR.—Dr. M. A. Morris, in the *Boston Medical and Surgical Journal* for November 29th, recommends division of the tendo Achillis as a means of overcoming the tendency of the upper fragment to override the lower one in cases of fracture of the lower end of the femur. He quotes Bryant (*Practice of Surgery*), as recommending the practice; and relates the following case.

The subject was a man aged forty, of delicate constitution, who had suffered in early life from a disease of the left knee-joint, which left the head of the tibia dislocated somewhat outwards and backwards on the condyles of the femur, but good use of the joint was regained. About four years ago, he sustained a fracture of both bones of the same leg, which made it shorter than its fellow. Two years ago, while returning from his place of business, he fell on the icy sidewalk and fractured the femur of the same side. The bone was broken obliquely, the line of fracture extending upwards and backwards two-and-a-half or three inches from its articular end. There was also a longitudinal fracture separating the condyles, which could be freely moved and felt to grate against each other; there was considerable shortening, but little swelling about the joint. The muscles of the thigh were soft and flabby; but, notwithstanding this, when extension was made and the limb put in position, the upper end of the lower fragments projected backwards, and could not be kept in position, on account of the traction of the gastrocnemius muscle.

Owing to the facts that this limb was already shorter than the other, and that the patient would be very liable to have an ankylosed knee-joint, with considerable additional shortening, it was deemed best to place the limb in the straight position, and to divide the tendo Achillis, in order to paralyse the gastrocnemius. Under ether, the tendon was divided and the tendency to displacement overcome. The limb was placed on a Macintyre's splint, and extension applied in the usual way by sticking-plaster straps bandaged to the leg and attached to a transverse foot-piece, from which swung a weight over a pulley at the foot of the bed. Counter-extension was made by elevating the foot of the bed; a cold-water dressing was applied over the joint, which began to swell a little, when an ice-bag was applied, and the swelling subsided. At the end of eight weeks the patient was up, and a month later was able to move round, and soon could flex the knee almost to a right angle. The amount of shortening was about half-an-inch.

HOSMER ON VAGINAL LITHOTOMY IN A FEMALE AGED 80.—At a meeting of the Obstetrical Society of Boston (*Boston Medical and Surgical Journal*, November 29th), Dr. A. Hosmer showed a calculus which he had removed by vaginal lithotomy from a woman aged 80, who had suffered for about three years from symptoms of chronic cystitis. The incision into the bladder was treated by pure carbolic catgut sutures, which was not again seen after the operation. The constitutional disturbance was moderate, and the muscular strength was not essentially impaired.

On the sixty-seventh day, the wound in the vesico-vaginal wall was completely closed. The patient

was in good general condition; the urine was acid in reaction, with a trace of albumen and some pus-corpuscles.

In commenting on the case, Dr. Hosmer says:—For the management of the wound after the extraction of the stone two plans are proposed: the one, adopting the practice which is followed in the analogous operation on the male, leaves the wound to take care of itself,—either to unite by adhesion through some fortunate apposition of its free edges, or to be closed partially or completely by the slower process of granulation; the other plan directs the use of sutures, metallic by preference, to be applied at once with the idea of obtaining union by first intention, and avoiding a vesico-vaginal fistula. The only advantage of leaving the wound open is the application of the principle of drainage to the treatment of what may be called, without much violence to the proper use of terms, a suppurating cavity. But the cystitis in the case under consideration is consecutive and not idiopathic; and the extent and degree of it depend partly upon the duration of the disease, and largely upon the proportion in which are united the two elements of irritation, the weight of the calculus and the quality of its external surface, assuming, of course, the perfect mobility of the stone in the bladder. Hence, it is not unfair to suppose that the inflammatory process which has been excited and maintained by a foreign body will begin to abate and its products to disappear as soon as the cause is removed.

Fifteen months after the operation, the patient finds herself in excellent general condition. On account, as is supposed, of its persistent thickening and contraction, the bladder has never been restored to a normal state. Urination becomes a necessity once in two hours or less, and its frequency is quite as annoying and urgent by night as by day.

MORGAN ON TREATMENT OF FRACTURED PATELLA BY STARCHED APPARATUS.—Dr. W. P. Morgan relates, in the *Boston Medical and Surgical Journal* for November 29th, a case of fracture of the right patella, occurring (on March 30th, 1877) in a small delicate woman, aged 27. On April 2nd, four days after the injury, the part having been kept at rest by lateral splints until the irritation and swelling had subsided, Dr. Morgan proceeded as follows.

He cut binder's boards to fit perfectly the shape of the leg, and sufficiently long to extend from the instep to the upper third of the femur upon the inside and the trochanter upon the outside of the leg. The boards, thoroughly softened, were then adapted closely to the leg, care being taken to prevent anything like constriction of the parts in the application of the bandages. The patient began to walk about the lower floor of the house the day after Dr. Morgan applied the starched bandage, namely, the fifth day after the accident, and continued to do so without any unpleasant symptom. The close adjustment of the apparatus kept the limb immovably extended; there was no muscular action, and could be none. The quadriceps lay quietly in its case of bandage, and gravitation allowed the upper fragment of the patella to fall into contact with the lower fragment, which was carefully supported by an extra turn of bandage. As the bandage had become loosened from atrophy of the muscles and soft parts, Dr. Morgan reapplied it on April 13th, and she immediately walked across the floor. Except for the halt in the gait, no one would suppose that she had so



lately received so severe an injury. On April 20th, she was found at the wash-tub, where she had been all the morning.

On May 10th, 15th, 19th, and 24th, he removed the bandage for ten minutes, and made flexion; there was a little stiffness for the first day or two.

On May 31st, he removed the outside board and cut down the other to a slight support, allowing a little motion; and directed her to take off the splint, and exercise the knee every day for a time without any support. The general form of the fractured patella was the same as its uninjured fellow, its circumference being slightly greater. Its horizontal diameter was one-sixteenth of an inch greater, and the perpendicular diameter was a quarter of an inch longer. The action of the joint was perfect, the patient suffering no inconvenience. On July 12th, 1877, the patella was of the same dimensions, and the action of the joint was perfect.

#### RECENT PAPERS.

- A Method of Swinging Injured Limbs. By Mr. Walter Pye. (*The Practitioner*, Dec. 1.)  
 A Complication of Simple Fracture of the Femur. By Dr. A. Fischer. (*Wiener Medizin. Wochenschrift*, Dec. 22 and 29.)  
 Five Cases of Abdominal Tumour in the Practice of Professor Esmarch of Kiel. By Dr. F. Lange. (*Berliner Klinische Wochenschrift*, Dec. 3.)  
 Acute Hemorrhagic Infarct and Spontaneous Gangrene of the Testis. By R. Volkmann. (*Ibid.*, Dec. 31.)  
 Cystic Blood-Tumours and their Treatment. By Dr. Kolaczek. (*Deutsche Medicin. Wochenschrift*, Dec. 15.)  
 The Treatment of Syphilis. By Dr. J. Caspary. (*Ibid.*, Dec. 22, 29.)  
 A Contribution to the Study and Treatment of Stricture of the (Esophagus). By Dr. G. Del Greco. (*Lo Sperimentale*, Dec. 1877.)  
 A Case of Gunshot Wound (from a Revolver); Retention of the Bullet in the Brain without Symptoms of Nervous Injury. By Dr. A. Rossi. (*Annali Universali di Medicina*, Dec. 1877.)  
 Traumatic Popliteal Aneurism treated successfully by Esmarch's Bandages. By Dr. O. Bloch. (*Hospitals-Tidende*, Dec. 12, 19.)  
 Antiseptic Treatment of Chronic Bursitis. By Dr. Robert Bieburg. (*Edinburgh Medical Journal*, Dec. 1877.)  
 The Antiseptic Dressing of Wounds. By John Chiene. (*Ibid.*)  
 Herniotomy. By Dr. J. R. Maconchy. (*Dublin Journal of Medical Science*, Dec. 1.)  
 Dr. Sayre's Suspension and Cuirass. By Dr. H. M. Jones. (*Ibid.*)  
 On a Case of Urinary Fistula. By Dr. Gross. (*Revue Médicale de l'Est*, Dec. 1.)  
 On the Treatment of Erectile Tumours. By Dr. Notta. (*L'Année Médicale*, Nov. 1877.)  
 Abstract of a Lecture on Cases of Talipes. By Mr. Richard Davy. (*The British Medical Journal*, Dec. 15.)  
 On Amputation by Ligature. By Dr. Bitot. (*Le Progrès Médical*, Dec. 15.)  
 On Nerve-Stretching. By M. A. Blum. (*Archives Générales de Médecine*, Jan. 1878.)  
 Lecture on Injuries of the Head. By Mr. Erichsen. (*Lancet*, Jan. 5.)  
 Clinical Lecture on a Case of Excision of the Knee-Joint, and on Horsehair as a Drain for Wounds. By Mr. Joseph Lister. (*Lancet*, Jan. 5.)

### MATERIA MEDICA AND THERAPEUTICS.

LEVI AND BARDUZZI ON THE THERAPEUTIC USES OF SULPHATE OF COPPER.—In the *Commentario Clinico di Pisa* for September 1877, Drs. G. Levi and D. Barduzzi publish experimental and clinical researches on some little known therapeutic applications of sulphate of copper. In both man and animals the results which they have obtained are so uniform as to merit serious consideration.

The animals on which experiments were made were horses, asses, and dogs: the dose at first was 15 centigrammes ( $2\frac{1}{2}$  grains), increased to one or two grammes (15 or 30 grains) on the second day, according to the tolerance of the subject; the result was always an increase of strength and flesh. At the necropsies, traces of the metal were found in the blood and in the liver, especially the latter. They

also gave copper on a large scale to patients in the Pisa Hospital; especially those affected with skin-diseases, and those in whom the processes of assimilation were impaired. Individuals affected with erythema, ecthyma, herpes zoster, eczema, scrofula, pellagra, and tuberculosis, were treated with sulphate of copper in doses of 3 to 7 centigrammes (about half a grain to a grain) daily, the dose being gradually increased, in order more readily to ensure tolerance of the remedy. The results corresponded with those obtained by experiments on animals. The patients bore the medicine well; the eruptions were favourably modified; the nutrition was improved; the strength and weight increased; the mucous membranes assumed an improved colour; and in some cases menstruation was re-established. The authors observe that it clearly follows from these facts that sulphate of copper, administered in a proper dose, is not only tolerated by the stomach and intestines, but gives a great impulse to the activity of the nutritive processes. They arrive at the following conclusions.

1. Sulphate of copper, given to animals in doses gradually increased from three-fourths of a grain to 15 grains, is easily borne; and in general this dose, far from producing disturbances, improves the state of nutrition.

2. Sulphate of copper powerfully modifies the nutritive functions, by virtue of the greater activity which it induces in the internal processes of tissue-change; and hence it is indicated in all states of the organism in which there is deficiency or atony of nutrition and impoverishment of the blood. In the treatment of such maladies, as well as of the functional disturbances which arise from them, notable benefit may be derived from its use.

3. The best method of administering sulphate of copper is in pill, at the commencement of or during meals.

A. HENRY, M.D.

SIEGEN ON THE UTILITY OF ALCOHOL IN DISEASE.—Dr. Siegen remarks (*Deutsche Medicin. Wochenschrift*, Dec. 8) that the use of alcohol is still dreaded by many in febrile and other affections, as adding fuel to the fire. The following cases show its utility.

The first case was one of phthisis in a youth 21 years of age, with a large cavern in the left and infiltration of the right pulmonary apex. There were considerable anæmia and wasting. The temperature varied from 39.2 to 39.5 Cent. (102.56 to 103.1 Fahr.) in the axilla. He was put upon a pure milk-diet, and took acetate of lead and opium, without any benefit; the appetite was bad. He was ordered beer, amounting to about  $3\frac{1}{2}$  ounces of alcohol per day, after which he greatly improved. Appetite and weight increased, the night-sweats diminished, and the temperature never exceeded 38.2 Cent. (100.58 Fahr.). Subsequently he again discontinued the alcohol, and died after eight months.

The second case was one of circumscribed peritonitis, following typhlitis, with an exudation extending from the linea alba over the entire right side of the abdomen. There was marked collapse, everything was vomited, except wine, and neither morphia nor chloral hydrate procured relief. The temperature stood at 40.6 Cent. (105 Fahr.). Heavy Rhine wine was ordered in large quantities, after which the patient slept for the first time during eight days, and the temperature sank to 38.6 Cent. (101.48 Fahr.). In three hours alcohol had been taken to the extent of about 5 ounces. For 14 days nothing but wine

was taken, and the patient made a perfect recovery.

Besides the above, Dr. Siegen employed alcohol in ten cases of pleurisy, two of typhoid, several cases of erysipelas, capillary bronchitis, and of pneumonia, all attended with more or less fever. In all, rapid convalescence resulted. Dr. Siegen specially recommends the use of alcohol in phthisis and hæmoptysis, in the form of one of the sweet wines, or of good beer. He has also observed it to be eminently useful in diarrhoea of children, with vomiting, where, to the exclusion of all other nourishment, it is sufficient to sustain the system, without ever being vomited, until the inflamed gastro-intestinal mucous membrane recovers its normal function.

W. J. TREUTLER, M.B.

GUBLER AND FÉRÉOL ON THE DIURETIC PROPERTIES OF THE HYDROBROMATE AND CITRATE OF CAFFEINE.—At the meeting of the Paris Société de Thérapeutique on November 27, Professor Gubler spoke on the diuretic properties of hydrobromate of caffeine (*Bulletin Général de Thérapeutique*, December 15). After having cited some test cases, he quoted one of a man suffering from an organic disease of the heart, whose liver was on the way to undergo the cirrhotic degeneration which precedes what is called nutmeg-liver. As a consequence of this affection, œdema of the lower limbs and abdomen were diagnosed. Digitalis had very little effect. M. Gubler then gave an hypodermic injection of fifty centigrammes of hydrobromate of caffeine. Diuresis set in after the second day, and gradually reached four litres and a half. When the injections were discontinued, the urine diminished gradually to a smaller quantity than the normal amount; the œdema, which had almost completely disappeared during the time of the diuresis, again appeared. Making a fresh injection, M. Gubler obtained the same result. It is important to note that with caffeine diuresis is abundant and almost instantaneous, whilst with digitalis the increase of urine only comes on on the second or third day. The caffeine, also, either citrate or hydrobromate, may be introduced under the skin without exercising any irritant action on the subcutaneous cellular tissue. M. Féréol mentioned the case of a patient who, suffering from a heart disease, had reached the last stage of cachexia. M. Gubler, who was called in consultation, prescribed an injection of morphia, and a draught with 30 centigrammes of caffeine. The next week, the urine amounted to one litre and a half, but the improvement did not last long, on account of the concomitant lesions of the kidneys. Death occurred two days afterwards. M. Gubler remarked in reference to this case, that the diuresis was always seen to diminish gradually, on account of the habituation of the organism to the physiological action of the drug. Account must also be taken of the reserve of liquid to be eliminated. Thus, for instance, digitalis has been given in cases in which there was no œdema nor infiltration (pneumonia); diuresis was not then observed. In a word, the diuretic effects are in proportion to the quantity of liquid accumulated.

SEGUIN ON CANNABIS INDICA IN MIGRAINE.—At a recent meeting of the New York Academy of Medicine, Dr. E. C. Seguin read a paper for the purpose of showing that, by the long-continued use of cannabis Indica, migraine or sick headache may be cured, much relieved, or mitigated in severity. He

was led to employ this treatment by a perusal of a paper by Dr. R. Greene (now Medical Superintendent of the East Riding Asylum), in the *Practitioner* for 1872. After some remarks on the symptoms and pathology of the malady, he says:—

I have treated migraine by—

1. Treating the patient, and removing all exciting causes.

2. Treating the attacks themselves.

3. Treating the disease, or the supposed fundamental pathological state in the nervous system.

1. The *treatment of the patient* consists in removing all relievable exciting causes, and more especially in correcting acidity. For this purpose I employ the ordinary means, viz., giving nitro-muriatic acid and alkalies, and greatly reducing the saccharine and amylaceous foods of the patient. In cases attended by debility, anæmia, and imperfect nutrition, it may be necessary to resort to tonics, including cod-liver oil.

2. *Treatment of the attack.* The first thing to be done is to place the patient under circumstances which secure quiet and semi-darkness. It is better not to allow the patient any food, not even liquids, until toward the close of the attack, or even not till next day; by this nothing is lost, and much wretchedness is avoided. Ice, or ice washed in brandy, is grateful.

If the patient have a warning (aura of migraine) before nausea or pain, much can, I believe, be done to cut short the attack or diminish its severity by the use of guarana, caffeine, or croton-chloral hydrate. In my hands, guarana, or the powder of the seeds of *paullinia sorbilis*, has proved very efficacious. I have prescribed the fluid extract of guarana, Caswell and Hazard's Elixir of paullinia, the French paullinia powders, and powdered guarana prepared by our druggists, and all of these preparations have in my hands often cut short or prevented attacks, *if given in the early stage of the disorder*. Of the elixir or fluid-extract I give a teaspoonful, to be repeated twice, at an interval of an hour. The powders are administered in twenty or thirty grain doses, also repeated every half-hour or hour. I think that I may report that nearly one-half of my patients have derived great relief from some preparation of guarana, and that in several of them attacks have been absolutely prevented, and they have been enabled to go about on the same day.

Caffeine, in doses of two grains, repeated every hour, until three or four doses have been taken, I have lately employed, upon the recommendation of Dr. Geo. M. Beard, and it has appeared to do good.

Croton-chloral hydrate, recommended in all neuralgic affections of the head and face, I have recently prescribed in doses of 15 and 20 grains, repeated every hour until four doses are taken or relief obtained. This remedy is to be used more especially in cases where pain is the first symptom, and in other cases if seen when the pain is fully established.

I have no personal experience with the use of large doses of bromide of potassium and of alcoholic stimulants, for the relief of attacks.

Hypodermic injections of morphia and atropia (gr.  $\frac{1}{8}$  to  $\frac{1}{2}$ , and gr.  $\frac{1}{60}$ ) have permanently relieved attacks in a few of my cases; but I am very reluctant to employ this means, so fraught with the danger of the formation of the opium habit. I never allow my patients to take opium or morphia themselves in this disease.

3. *Treatment of the disease.* No treatment of this sort had been tried, to my knowledge, before Dr.



Greene made his researches upon the effect of cannabis Indica. The principle of the treatment is to keep the nervous system steadily under a slight influence of cannabis for a long period of time.

I give to adult females one-third of a grain of the alcoholic extract of cannabis Indica before each meal, increasing the dose after a few weeks to one-half grain. Males can generally begin with one-half grain, and it is well to give them three-quarters of a grain in two or three weeks. These doses must be taken with the greatest regularity, just as faithfully and regularly as bromides in epilepsy. Indeed, when beginning such treatment, I usually obtain a promise from the patient that he will regularly take the pills for a period of three months.

As a rule, no appreciable immediate effect is produced by the above doses, though I have known lightness of the head and slight confusion of mind to result from an initial dose of one-half grain three times a day.

Under this apparently and essentially simple plan of treatment, I have known what may be termed excellent results to be obtained. Of course I do not mean to say that all my patients have been benefited; but I feel certain that about one-half of my cases have been relieved. A few—two or three—after being more than a year without return of their migraine, have passed from under immediate observation. One of these now very rarely has headache, although for several years he has taken no medicine. The majority of patients relieved have obtained months of freedom from attacks while taking the remedy.

I think that we may say of cannabis for migraine, that it is nearly as efficacious as the bromides in epilepsy. Both *may* cure; both *do* bring about remarkable interruptions in the series of attacks, both must be employed in the shape of the continued dose.

Cannabis in migraine is less effectual than the bromides in epilepsy, but, on the other hand, it is superior to them in not producing unpleasant or injurious effects.

**TROQUART ON THE ACTION OF INTRAVENOUS INJECTIONS OF CHLORAL ON THE CIRCULATION AND RESPIRATION.**—Dr. Troquart has studied in M. Marey's laboratory, by the aid of self-registering apparatus, the action of intravenous injections of chloral in animals. He arrives at the following conclusions (*Thèse de Paris*, Aug. 6, 1877). When a sufficient quantity of chloral in solution is injected into the venous system of an animal, disturbances of the action of the heart and of respiration are almost immediately and simultaneously produced, consisting of more or less prolonged stoppage (primary symptoms). The primary cardiac symptoms, which vary considerably according to the dose, the rapidity of injection, etc., consist, in order of decreasing gravity, of, 1. Definitive arrest; 2. Momentary arrest; 3. Simple slackening of the pulsations. The indications furnished by arterial pressure confirm the results obtained by direct exploration of the heart. The heart under the influence of chloral becomes excessively distended in the interval of two systoles. At the commencement, the ventricle empties itself completely, but soon becomes powerless to send a flow of blood of any volume into the arterial system. A heart congested in a permanent diastole, and showing small ventricular jerks without any useful effect is then seen. During the ventricular arrest, the systole of the auricle persists, which explains the congestion and the constant increase in the size of

the heart under the influence of chloral. The disturbances are the more quickly repaired in proportion to their want of gravity. The time occupied by reparation shows nothing stable in its mode of appearing, its characteristics, or its duration, it varies especially according to the dose injected, and the quantity of chloral previously absorbed by the animal. Rapid after a first injection, it becomes slow after a series of successive injections. The chloral acts by its immediate contact with the internal septum of the right heart. It excites the sensitive nerve-filaments of the endocardium, and induces in the intracardiac ganglia a reflex action, which reacts on the moderator fibres of the pneumogastrics, whence results arrest of the heart in diastole. If a current of blood charged with chloral be made to pass through an isolated heart of the land tortoise, a systolic arrest is observed. The chloral penetrating immediately into the coronary arteries, when it leaves the ventricle, which is simple, acts directly on the muscular fibres, of which it provokes the contraction, as it produces that of the muscles into the arteries of which it is immediately injected.

Chloral gradually brings on paralysis of the peripheral extremities of the pneumogastrics, whence there is a decrease in the cardiac symptoms in proportion as the injections are multiplied.

Consecutive cardiac troubles are very variable; for the most part they are characterised by a period of slackening, followed by irregularities. In the mammalia, periods of abortive systole, with great lowering of pressure and disappearance of arterial pulsation, are observed. Chloral induces general congestion of the organs, dilatation of the capillaries, through paralysis of the vaso-motor nerves, which explains certain phenomena, such as lowering of the pressure, diminution of the temperature, &c. The respiratory disturbances are analogous to the cardiac troubles; simple slackening, however, is rare; for the most part, it is an absolute arrest, which follows almost immediately on the intravenous injection.

The respiratory arrest almost always supervenes before the cardiac troubles, and only ceases when these are partially repaired. The respiratory arrest may be definitive, and yet the pulsations of the heart may still persist for some minutes. The use of electric currents against these accidents is not entirely without danger. Artificial respiration seems to yield better results. The theory of immediate respiratory troubles necessitates further researches, but may take its stand on this fact, that reflex muscular action, of which the starting-point is in the excitation of the sensitive filaments of the endocardium, is concerned in it.

**OCUMKOFF ON SUBCUTANEOUS INJECTION OF ETHER.**—Mdlle. Zenaïde Ocumkoff maintains, in her *Thèse de Paris*, June 1877, the efficacy of subcutaneous injections of ether in doses of from 15 to 60 minims. In the human subject, as tonics and excitants, they produce the following phenomena: elevation of the temperature, augmentation of arterial pressure of all the secretions, and of pulmonary combustion, agitation, hyperæsthesia of the senses and the skin, and dilatation of the pupil. According to Mdlle. Ocumkoff, the use of this drug is indicated in cases of algidity, prostration, and profound coma, in inanition, and, in short, in all cases in which the medical attendant finds an extremely weakened state of the whole organism. In surgical and puerperal hæmorrhages, and in wound hæmorrhages, subcu-

taneous injections of ether are as distinctly indicated as is transfusion of blood.

**USE OF CARBONIC ACID GAS AT VICHY.**—The *Mouvement Médical*, of October 20, states that carbonic acid is employed at Vichy in the form of general and local baths, in douches and injections, and by the stomach. For the general baths ordinary bath-tubs are used, which are simply covered with an impermeable cloth, destined to protect the head. The sittings last from twenty minutes to an hour. In the local baths the affected limbs are simply enclosed in cloth or caoutchouc bags, into which the gas is then introduced. These baths have been used with more or less success to relieve the pains of gout and rheumatism, of sciatic and other neuralgia, etc. In these cases, the gas exerts an analgesic and a diaphoretic action. For douches and injections the gas is conducted to the diseased parts by means of flexible caoutchouc tubes. These douches and injections have given excellent results in cases of pruritus and spasm, in the different vaginal and uterine neuroses, which are so often the cause of sterility, and in ulceration of the cervix uteri. Most of the cases of simple ulceration of the cervix heal rapidly under the treatment. The injections, however, must be used with some caution, for when the mucous membrane is inflamed and excoriated, a dangerous quantity of the gas may be absorbed by the denuded surfaces. The administration of the gas by the stomach does not seem to be of much use.

The analgesic and cicatrising properties of carbonic acid have been demonstrated by the experiments of Ingen-Housz and others. It relieves the pain of a blister almost immediately, and hastens the reformation of the cuticle. When the gas is injected into the bladder or vagina, a slight sensation of tickling and heat, which radiates towards the abdominal region, is felt at first, but it is soon followed by relief of the hyperæsthesia, and sometimes by complete cessation of the pains. Follin has employed injections of carbonic acid gas in the treatment of cancerous ulcers of the cervix uteri. In two cases they relieved the pains completely and rapidly; in one the relief lasted twenty-four hours, in the other eight days. Of course the injections had no other influence on the general or local condition. In cases of rheumatic paralysis, the carbonic acid baths seem to prove very useful in restoring the power of motion.

**ROBERT ON THE TREATMENT OF THE COMPLICATIONS CONSECUTIVE ON TYPHOID FEVER BY COLD BATHS.**—Dr. Ernest Robert is an uncompromising adversary of Brand's method. In his *Thèse de Paris* (April 28, 1877) he formulates the following conclusions.

1. The accidents brought on by Brand's method occur after deep-seated disturbances of the nervous and circulatory systems, or still more under the influence of continuous cold.
2. These accidents spring from congestive and inflammatory processes.
3. With regard to the air-passages, they bring on angina, bronchial and laryngeal affections, sometimes of a very serious nature, as œdema of the glottis, diphtheria, pleurisy, and especially pneumonia.
4. Hæmorrhagic complications—such as epistaxis, bronchial and interstitial hæmorrhages—often occur. But it is the intestine specially which is the principal seat of these always serious and sometimes fatal complications.
5. The nervous system likewise presents symptoms of all kinds (ver-

tigo, epileptiform attacks, contractions, severe pains in the extremities, etc.). 6. The most formidable accidents are syncope and collapse, which may bring on rapid or sudden death of the patients. 7. The baths have also brought on more uncommon complications; such as whitlow, abscesses, phlegmons, congestive nephritis, and probably diathetic manifestations—such as rheumatism and tuberculosis. 8. Complications may be isolated or inter-associated, and the patient may in addition have to undergo the usual complications of the disease. 9. Brand's method, based on a false interpretation of excessive temperature, exhaustive and painful in use to patients, brings on painful, serious, and sometimes fatal accidents. It is likewise condemned by the comparison of its statistical results with those of other methods.

**BIGELOW ON THE LOCAL USE OF HYDRATE OF CHLORAL IN TETANUS.**—Dr. J. K. Bigelow, of Indianapolis, communicates (*American Practitioner*, December 1877) the following interesting case. He was called in August 1873, to see Kate —, aged 16 years, who had always enjoyed the most robust health. He found her in a convulsion with trismus and opisthotonos, the result of having "run a rusty nail through her foot". On examination he found the perforation of the foot, the wound being bloodless and swollen. She had been taking quarter-grain granules of morphia by direction of Dr. Athol, who had been called away from the city. Dr. Bigelow continued the same treatment, until 14 grains of morphia had been given within 24 hours, without the least relief. Calabar bean was also used, without mitigating any of the symptoms. Drs. Mears, Newcomer, and Dunlap, were called in consultation; and while they agreed with him that it was not a clear case of tetanus, yet thought the patient in a very precarious condition. While they were consulting, Dr. Mears noticed Dr. Bigelow constantly rubbing his fingers and thumb together, and asked the reason. He told him that they were numb, as the result of having rubbed up some chloral between them, previously to dissolving in water, the day before, and that a total want of sensation had remained ever since. Dr. Mears suggested that it might have the same effect on the patient's foot. They immediately opened the incision in the wound, and introduced all the chloral it would hold, probably a drachm. The pain, convulsions, and trismus were relieved in less than half an hour; and perfect recovery followed in a few days, without any bad effects from the morphia or chloral, except a slight slough from the latter.

**MACKIEWICZ ON MILK-DIET IN THE TREATMENT OF NEPHRITIS.**—Dr. H. Mackiewicz shows, in his *Thèse de Paris* (June 1877), by cases reported from Dr. Lancereaux's wards, the good effects obtained by milk-diet in Bright's disease, and how this regimen should be initiated. Asses' milk should be used in preference; where that cannot be obtained, cow's milk, after it has stood for twelve hours and been carefully skimmed. It may be drunk either hot, cold, or lukewarm, as the patient likes. On the first day of the milk regimen, two litres (about 3½ pints), with some food, should be given. The milk should be drunk by the glass, and in small mouthfuls. The whole quantity must be divided into four parts, each taken at different times at equal intervals throughout the day. The next day three litres must be given, and no other food; and on the following



days the quantity must be augmented by one litre, until from four to six litres have been disposed of, according to the tolerance of the patient. If milk have not been tolerated, Vichy water, lime-water, calcined magnesia, or some alcoholic or acid liquid may be added to it. From one to two and a half drachms of chloride of sodium may also be added to it with advantage. If the patient be anæmic, some of the preparations of iron and quinine may be safely employed. If at the end of a week the dropsy be not diminished, and the flow of urine increased, the milk-diet must be given up, and recourse had to other means, such as purgatives and sudorifics; diuretics have no effect. This inefficacy is always a guide as to the gravity of the affection and its incurability. The treatment should be continued so long as it is tolerated, until the dropsy, and, if possible, the albuminuria have disappeared. The disappearance of the latter sometimes only occurs five or six months after the most rigid observance of the milk diet. When the albuminuria has disappeared, a mixed diet should be gradually adopted, until no more milk is given. The reappearance of the albuminuria or the dropsy, where the albuminuria has not been improved, will always be an indication to resume the absolute milk-regimen, which must also be resumed on the appearance of uræmic accidents. Finally, it must be remembered that, as the milk diet is nearly always successful where all medication has failed, it is a duty, when any kind of nephritis is met with, to begin by a rigid milk-diet, and only to have recourse to other therapeutic means when success is not attained by the one under consideration.

**LEAMING ON THE PROPERTIES OF THUJA OCCIDENTALIS.**—The following memoranda relative to the use of preparation of thuja occidentalis, which appears just now to be attracting some interest in New York, have been contributed to *New Remedies* by Dr. J. R. Leaming.

The fluid-extract or saturated tincture may be given in drachm-doses from three to six times daily.

It may be given for malignant disease or for pulmonary hæmorrhage, in a glass of milk or in cod liver oil.

It may also be applied to cancerous ulcerations or tumours. It may be applied in the cavity—in the os—or to the cervix of the uterus in malignant disease, or in non-malignant, when there is a flabby condition of the parts with a tendency to bleed; and also, under the same conditions, to the throat. It may be applied to warts, and especially to venereal warts.

It may be given in amenorrhœa from simple causes, but does not affect a healthy gravid uterus.

The elixir of thuja and glycerine is a more elegant mode of administering the medicine, and is a valuable substitute for cod-liver oil.

The glycerole may be made into suppositories, or it may be mixed with the fluid extract, for application to the os uteri upon a pessary of cotton.

This medicine may become very useful to the practitioner in the treatment of malignant disease, especially in diminishing tendencies to bleeding and rapid progress of the local disease. It also relieves the violence of pain. In some cases the disease has disappeared under its use—not always.

The literature referring to this drug is quite limited. A. Kawalier, of Vienna, discovered a bitter principle, which he called *pinipicrin* (found also in *Pinus sylvestris*), a volatile oil, sugar, gelatinous matter, a variety of wax, resin, and tannic acid (*Chem. Gaz.*, Feb. 1, 1855), and more recently a pecu-

liar crystallizable colouring principle, which he termed *thuvin*, another yellow substance which he called *thujetin*, and still a third *thuigenin*; also a variety of acid, which he named *pinnitannic*. Kawalier's second paper in the *Chem. Gaz.* Nos. 392-3, 1859, is said to contain a full description of the processes he employed.

Regarding the properties of thuja, the wood when burnt gives off an agreeable smell, which led to its former use for sacrificial purposes. A salve made with the leaves used to be a remedy employed by the Indians for the relief of rheumatism, and a poultice of the leaves made with milk has been highly spoken of for the same purpose. By distillation the leaves yield a yellowish-green volatile oil, which has been used as a vermicide. Boerhaave praised the action of the distilled water as a remedy for dropsy.

Some years ago Dr. Leaming contributed to the *New York Journal of Medicine* (new series, vol. xiv), a paper on the use of thuja in affections believed to be cancerous, and in venereal excrescences; and in 1856, in the same journal, Dr. Benedict recommended the strong tincture as an emmenagogue.

Thus far thuja appears to have been employed empirically only, but it would seem, on reviewing the affections in which it had been of service, that its action may be explained by a property somewhat similar to that possessed by ergot, namely, of causing contraction of unstripped muscular fibres. This would explain, in some degree, its alleged power of controlling capillary hæmorrhage, and the growth of vascular tissues like cancer and condylomata.

**SNIDER ON PICRATE OF AMMONIUM IN INTERMITTENT FEVER.**—Dr. J. W. Snider, of Fairland, writes to the *Ohio Medical Recorder* that intermittent fever has lately been unusually prevalent in his section of the country, no persons or ages being exempt. As a consequence a variety of remedies was tried, and chief of them quinine. Many stomachs failed to retain this remedy in the large doses required, and even when the paroxysms were arrested it was only for a brief period. Cinchonidia, owing to its cheapness, received a trial, "and was in several cases successful, as much so as quinine". Fowler's solution was efficient in some cases of long standing, but relapses occurred, and it seemed to have lost its virtue. Picrate of ammonium was resorted to in a number of cases, always with success; and the three following cases are given because they had been unsuccessfully treated with quinine.

**CASE I.** Mr. M., aged 45, had had chills of the tertian type, for seven weeks, held partly in check by quinine, cinchonidia, and arsenic. For the last two weeks he had had a rigor every second night, though taking 45 drops of Fowler's solution daily. Dr. Snider prescribed grain-doses of picrate of ammonium twice a day till six doses were taken. The patient did not have a rigor afterwards. On the fourth day afterwards, he repeated the prescription for fear of relapse.

**CASE II.** A child, aged three, had fever of the tertian type, for which it had taken calomel, quinine, etc. Dr. Snider gave Fowler's solution. The chills were checked for a few days, but repeatedly recurred. He prescribed picrate of ammonium, in doses of one-sixth of a grain, twice a day for three days. There were no more chills. A few days afterwards, he repeated the prescription. The child recovered.

**CASE III.** Mrs. S., aged 28, had had rigors for five

or six weeks, beginning with a light attack of remittent fever. Quinine in five-grain doses was given every two hours, till four were taken. A chill or two was missed. Six-grain doses of cinchonidia, repeated five or six times, failed. Arsenic was administered for a length of time without effect. Dr. Snider gave grain-doses of picrate of ammonium twice a day for three days; the patient had no chills afterwards.

**TREATMENT OF LOCAL RHEUMATISM BY INJECTION OF MORPHIA AND ATROPIA.**—In Dr. W. Pepper's wards in the Philadelphia Hospital (*Boston Medical and Surgical Journal*, October 25th) the painful state of the muscles is subdued by injections of one-eighth of a grain of atropia and one-eighth of a grain of morphia, well diluted, into the body of the muscle. This mode of procedure has been invariably followed by the most excellent results. The patient, who, before the injection, was so sore that he could scarcely move without bringing on the most excruciating pain, after the injection holds his head up, feels the place where the application was made, then moving a little finds that his pain has gone, and looks and speaks the most intense gratitude. This is a particularly useful method of treatment in practice among the poorer classes. Great care must always be had in the administration of morphia and atropia to nursing women, as belladonna is the most powerful anti-galactagogue known, and too large doses of morphia not unfrequently affect the child through its mother's milk.

**DESNOS ON DIGITALIS IN METRORRHAGIA.**—Amongst the medicines having the power of controlling congestive metrorrhagia, M. Desnos (*Journal de Médecine et de Chirurgie Pratiques*) strongly recommends digitalis, which may be successful even where ergot has not yielded good results. The digitalis is given in the form of an infusion, in doses of from 50 to 60 centigrammes ( $7\frac{1}{2}$  to 9 grains) in 150 grammes (about 5 ounces) of water. It acts in these cases by slackening the circulation. M. Desnos reports, amongst other cases, one of a young woman, in whom a metrorrhagia of several days' duration could not be arrested by a great variety of means successively employed. Digitalis administered in the manner indicated above almost immediately induced stoppage of the hæmorrhage.

**ALVARENGA ON THE TREATMENT OF ERYSIPELAS BY SILICATE OF SODA.**—This method has been employed specially by Dr. Alvarenga of Lisbon, who credits it with great efficacy. His paper (an extract of which is given in the *Journal Méd. Chirurg. de Pesth*) is based on 48 cases of erysipelas of the scalp, face, and limbs, both fixed and erratic. He asserts that, with the help of this remedy, the disease does not last more than four or five days. The solution of silicate of soda used is the same which is employed in the manufacture of immovable apparatus. It is diluted with seven or eight times its weight of distilled water. It is very important to make a preliminary essay of this preparation with litmus paper; so long as it is acid, soda should be added to neutralise it. The solution must be spread over the affected parts, morning and night, with a pencil, and the surfaces must be allowed to dry in the air. At the end of four or five days, when the fever, œdema, and redness, have subsided, the use of the silicate of soda is suspended, and the parts

affected are covered up with cotton-wool steeped in oil of sweet almonds.

**WHITE ON TURPENTINE IN TYPHOID FEVER.**—Dr. Persé White, of Dublin, in the *British Medical Journal* of December 15, states that he has found turpentine of much use in typhoid fever. His formula is the following, which he uses if bronchitis be present, and even if diarrhœa complicates the case, R Terebinthinæ olei, ʒii; liquoris potassæ ʒii; mucilaginis acaciæ ʒiv; syrupi papaveris albi, syrupi floris aurantii, aa ʒviii; aquæ camphoræ q. s. ad ʒviii. Fiat mistura. A tablespoonful to be taken every fourth hour, the bottle being first shaken.

Since he commenced that treatment, he says, he never lost any case of typhoid from either bronchitis or diarrhœa, or from its sequelæ of ulceration or hæmorrhage. Each epidemic of typhoid (and at present there is a wide-spread and severe one passing over the country) is marked by its peculiar characters. In the present time, most of the cases of typhoid are characterised by intense pain in the abdomen, with enormous flatulent distension. Constipation exists before the illness is developed, and at times during its progress; and when it is removed by purgatives, diarrhœa sets in.

**ASPLAND ON THE THERAPEUTIC USES OF WHITE PAINT.**—Mr. Alfred Aspland writes to the *British Medical Journal* of December 1, that for many years he has used ordinary white paint for the treatment of burns and scalds, and never knew an instance of failure. The pain ceases in a couple of minutes. The paint, repeated if necessary, forms a new skin; there is no discharge, and no further application necessary. He has never, during many years' experience, known a case of lead-poisoning from its use. Even in cases where death ensues from extensive and deep burns, it saves suffering, but then requires repeated application. A wide-necked bottle full of paint should be kept in every house, ready for immediate application. Where large nævi have been destroyed by the actual cautery, its application has saved all after-suffering. During twenty years' attendance as surgeon to the Ashton Barrack Hospital, and during ten years' attendance as surgeon to the Ashton Infirmary, Mr. Aspland always adopted this method.

**TUCKER ON COLOCYNTH.**—Dr. J. L. Tucker (*Chicago Medical Journal*, October) asserts that colocynth will allay the pain caused by excessive peristaltic action better than any drug in use, not excepting opium, providing it be employed in proper doses. Enough of the tincture of colocynth is used to render water slightly bitter; of this, a teaspoonful, *pro re natâ*, will afford speedy relief from violent griping.

**LAFFONT ON THE ANÆSTHETIC ACTION OF TETRACHLORIDE OF CARBON.**—Dr. Georges Laffont, in his *Thèse de Paris*, August 8, 1877, has reported his experimental researches on the anæsthetic action of tetrachloride of carbon. He finds that inhalation of this liquid brings on anæsthesia in animals, and comes to the following conclusions. Tetrachloride of carbon possesses anæsthetic properties, and in this respect may be ranked with ether and chloroform. The anæsthetic stage is preceded by excitement characterised by tonic and clonic convulsions.

To this considerable drawback must be added the



danger resulting from the weakening of the heart's action and the tension of the blood in the vessels.

Dr. Laffont does not give any experiments showing the anæsthetic effects of the tetrachloride of carbon on the human subject, and declines to express any opinion as to its use in that way, in consequence of its having shown so strong a power of producing convulsions in animals. He does not think that it is superior to chloroform or even to ether in its anæsthetic effects. The stage of excitement, marked as it is by violent convulsions, would be dangerous to the human subject. In the absence of chloroform it might be employed in surgery if associated with morphia, which would diminish the danger. Tetrachloride of carbon can be used in experimental physiology, either alone or in association with morphine. M. Laffont has found that from 12 to 15 grammes (150 to 225 grains) are necessary to produce anæsthesia in dogs.

**SMITH ON NUX VOMICA IN NAUSEA AND VOMITING OF PREGNANCY.**—Dr. Q. C. Smith (*Pacific Medical and Surgical Journal*, September) asserts that tincture of nux vomica will prove effectual in relieving the nausea and vomiting of pregnancy in the great majority of instances, and mentions the following formula: *R.* Tinct. nucis vomicæ, Liq. bismuthi,  $\text{aa}$   $\frac{3}{4}$  ss. *M.* One teaspoonful three or four times daily, after meals.

**SPINZER ON SALICYLIC ACID IN IDIOPATHIC ERYSIPELAS.**—Dr. P. J. Spinzer (*Ohio Medical Recorder*, September) used in a case of idiopathic erysipelas, as a local application, 30 grains of salicylic acid in one ounce of glycerine, with remarkably favourable and rapid results.

**MARTIN ON LIQUORICE IN DIABETES MELLITUS.**—M. Martin (*Bulletin Gen. de Thérap.*, September 1877) and *Philadelphia Med. Times*) has experimented with liquorice in order to determine whether it can be employed in the dietetics of diabetic patients. Having under his care a man suffering with this disorder, he made him drink daily about one quart of an infusion of liquorice-root, and ordered his coffee to be sweetened with a small quantity of a stronger infusion. This lessened the bitterness of the coffee, but did not destroy its aroma or other qualities. A daily examination of the urine showed not the least increase in the amount of sugar excreted. These experiments, and others by the same author, show that patients of this description may use liquorice, without fear of increasing their malady, for the purposes for which sugar is ordinarily employed.

**PIFFARD ON TRITURATIONS.**—At the New York Academy of Medicine, Dr. H. G. Piffard read a paper on triturations, comparing the ordinary pharmaceutical trituration of mercury and chalk with the trituration of mercurials with sugar of milk. From an examination of both under the microscope, he found that the sugar-of-milk preparation was to be preferred. He thought, moreover, that it would be wise to introduce many of the sugar-of-milk triturations into practice, and not leave them entirely to the homœopaths; particularly so, inasmuch as they were original with Baron Storck, and merely extensively adopted by homœopaths.

**CAMPHOR-CHLORAL.**—Mr. W. T. Tocher recommends the following formula for a camphor-chloral liniment, which has a powerful antineuralgic applica-

tion: Chloral-hydrate and camphor, of each one ounce; glycerine, to six ounces; powder the camphor using as usual a few drops of rectified spirit, then mix with the chloral, and allow to stand in a mortar until the mixture becomes liquid. Having poured this into a bottle, add the glycerine and shake.

**FORMULÆ.**—The following formulæ are taken from a collection in the *Philadelphia Medical and Surgical Reporter* for December 15.

**Dusting Powder for Chafing and Eczema of Vulva.**—*R.* Calomel,  $\frac{3}{4}$ ss; calamina,  $\frac{3}{4}$ ss. *M.* Sig. —Apply several times a day.

**Opium.**—The following is recommended as a form to give to those with whom it disagrees: *R.* Pulveris opii, gr. j; potassæ carbonatis, gr. x. *M.* Dissolve in half a wineglassful of water.

**Chilblains.**—The following is to be painted on with a camel's hair pencil, two or three times a day. It gives sure relief, and if applied in the earliest stages it will speedily cure. *R.* Collodion,  $\frac{3}{4}$ vj; tincturæ ferri chloridi,  $\frac{3}{4}$ j; olei ricini, gtt.v. *M.*

**Podophyllin Pill.**—*R.* Podophyllin; ext. hyoscyami,  $\text{aa}$  gr. iij; saponis, gr. iiss; syrupi simplicis, gtt.vj. *M.* Divide in pilu as xii.

**Gallic Acid.**—The *Canada Medical Record* gives the following formula for gallic acid: *R.* Acidi gallici,  $\frac{3}{4}$ j; glycerinæ,  $\frac{3}{4}$ j; aquæ bullientis,  $\frac{3}{4}$ v. *M.* A tablespoonful *pro re natâ*.

## RECENT PAPERS.

The Physical Theory of Metallotherapy. By Dr. R. Vigouroux. (*Gazette des Hôpitaux*, Nov. 17.)

Solid Food in Typhus Fever. By Dr. Dyce Duckworth. (*The Practitioner*, Dec. 1.)

Sulphurous Acid in Small-Pox. By Dr. J. Ingleby Mackenzie. (*Ibid.*)

On Blood-Letting. By Dr. Ferrand. (*La France Médicale*, Dec. 1.)

On a New Preparation for Allaying Irritation of the Actively Secreting Mammary Glands. By Dr. Miller. (*Edinburgh Medical Journal*, Dec. 1877.)

Observations on Antipyretics. By J. A. E. Stuart. (*Ibid.*)

Notes on Health-Resorts in Switzerland. By Dr. P. C. Smyly. (*Dublin Journal of Medical Science*, Dec. 1877.)

The Value of Koumiss in the Treatment of Nausea, etc. By Dr. V. Jagielski. (*British Medical Journal*, Dec. 29.)

On the Relations of Therapeutics with the other Branches of Medicine. By Dr. Soulier. (*Lyon Medical*, Dec. 23.)

Note on Maté (Paraguay Tea). By M. H. Byasson. (*Journal de Thérapeutique*, Dec. 25.)

## DISEASES OF CHILDREN.

**RIZZOLI ON A CASE OF CONGENITAL VENTRAL HERNIA SUCCESSFULLY TREATED.**—In the *Bollettino delle Scienze Mediche di Bologna*, vol. xxiii (abstract in *Annali Universale di Medicina*, December, 1877), Professor F. Rizzoli describes the case of a male child, which had an opening occupying the umbilical and a great part of the epigastric regions. It was ovoid, its direction was vertical, and its boundary comprised the entire thickness of the skin and of the abdominal wall. Through this abnormal aperture the abdominal viscera escaped, especially when the child cried, and were covered by the amnion and by Wharton's jelly. The skin around the sac was not continued over it, but was arrested at the same point as the abdominal wall. This, and the large size of the aperture, were conditions very unfavourable to the success of an operation. Dr. Rizzoli, however, undertook the treatment. He ordered the mother to avoid everything that might cause the child to cry; to give it milk frequently, but in small quantities; to employ ordinary means for the evacuation of the meconium; and, above all,

to prevent the escape of the viscera through the aperture. The part was covered with a piece of silken cloth, moistened with water and smeared with butter, and the surface of the sac was frequently bathed. The dressing was secured by a bandage round the abdomen, which, while it favoured the retention of the bowels, did not draw the edges of the aperture together. This arrangement was made in order to prevent the formation of a too small cicatrix, which might render the abdominal cavity too small to contain the viscera, and produce disastrous results, such as occurred in a case recorded by Goyrand, where death was caused by volvulus; and in one by Requin, where an inguinal hernia was formed on each side.

Under these precautions, after the amnion and the stump of the umbilical cord had fallen off, the surface of the sac became gradually covered with granulations, and cicatricial tissue advanced gradually from the border of the ventral aperture, covering it in completely, and retaining the viscera in the abdomen without the least injury. The ovoid cicatrix, when the report was made, was 0.6 inch long, 0.77 inch wide, and 2.2 inches in circumference.

When the child was eight months old, Dr. Rizzoli showed it to the Medico-Chirurgical Society of Bologna. It was then in florid health, and the umbilical cicatrix was sound. A. HENRY, M.D.

ALLBUTT ON THE TREATMENT OF ECZEMA IN CHILDREN.—Mr. A. Allbutt writes in the *British Medical Journal* of November 24: If there be any of the characteristic discharge usual in cases of acute inflammatory eczema in the ichorous stage, I advise, as a soothing application, the following remedy: Olei amygdalæ dulcis ʒij: olei amygdalæ amaræ mxx: mix; to be painted over the affected surface two or three times a day. If the disease be in the squamous stage, pure terebene is a certain application, to be used in the same manner. As regards internal treatment, I suggest dilute nitric acid in gradually increasing doses, according to age, combined with decoctum cinchonæ flavæ, and perhaps the administration of cod-liver oil. A diuretic might be of service. Sometimes the Vals water, or, if there be any anæmia, the Pyrmont or Tunbridge Wells water, is of use. Of course, many circumstances have to be taken into consideration in the treatment of eczema as to causes, complications, diathesis, etc. The above should be adopted, with nutritious diet, good air, and avoidance of stimulants.

#### RECENT PAPERS.

- Two Cases of Intestinal Invagination. By M. Thuvien. (*Gaz. Méd. de Paris*, Nov. 21.)  
Intestinal Invagination in Children. By Dr. Hirschberg. (*Nordiskt Medicinskt Arkiv*, Band ix, Häft 4.)  
A Rare Case of Hysteria in a Child. By Herr Greisinger (*Hospitals-Tidende*, Dec. 26.)

#### OBSTETRICS AND GYNÆCOLOGY.

DEPAUL ON THE TREATMENT OF ECLAMPSIA.—In the *Journal des Sages Femmes*, 1st November 1877, Professor Depaul insists that copious bleeding from the arm is the only method of treating eclampsia which meets with success. He refers to an experience of 250 such cases. As regards the introduction of premature labour, he considers it tedious and provocative of fresh convulsions. The "accouche-

ment force" he never has recourse to. He also advises bleeding as prophylactic treatment.

LARCHER ON RED MILK.—In the *Annales de Gynécologie*, October 1877, Dr. Larcher discusses the different theories which have been set forth to explain the phenomena of red milk. He mentions the red coloration which takes place in the milk of cows fed daily with madder. This coloration is due to the passage of the colouring matter of the madder into the blood. Lagrésie mentions the case of a nurse whose milk became red after drinking a decoction of madder. It has also appeared after the ingestion of some resinous plants. In other cases it seems that the colouration is due to the presence of hæmatin or blood-corpuscles in the milk. This red coloration has been observed to take place in a cow during the first days of suckling her calf, without the slightest apparent inconvenience, either to the mother or its suckling; it then gradually disappeared.

GARRIGUES ON LYING-IN AFTER DELIVERY.—In the *Proceedings of the Medical Society of the County of King's*, 1877, is an article by Dr. Garrigues on the question, "How long ought women to stay in bed after delivery?" He quotes Dr. Goodell, who adduces the following reasons in favour of encouraging women to get up early. 1. Labour being a physiological process, it should not be made to wear the livery of disease. 2. The upright position excites the uterus to contract, and lessens the amount and direction of the lochia. 3. Uterine diseases are hardly known among nations whose women early leave their beds. 4. Experience has shown him that convalescence is rendered far more prompt and sure. Dr. Garrigues thinks the present condition of women is not one of a normal physiological nature; further, that flexions may be produced by the flaccidity and weight of the womb before the contractions impede it, and that the amount of lochia may be diminished by carbolised injections. Nor do we know much about the condition of the uterus in ancient or far remote peoples. Lastly, he thinks Dr. Goodell's results due to his other measures. In conclusion, Dr. Garrigues remarks that anatomy and physiology teach us that, after parturition, the uterus is large, heavy, and flabby; that all the surrounding parts destined to support it are soft and yielding; that its interior presents a large wound; that the placental site is pervaded with veins filled with recently formed blood-clots; that the process of transformation, absorption, and restitution requires at least two months; and that retrogression is most marked during the second week. All this speaks in favour of prolonged rest in a horizontal posture.

BIEDERT ON SOUNDING OF THE FALLOPIAN TUBE.—In the *Berliner Klinische Wochenschrift*, October 1877, Dr. Biedert relates the case of a young woman who had been married two years and had remained sterile, suffering from dysmenorrhœa. Dr. Biedert found a small os and conical cervix, which he dilated with laminaria tents. On passing the uterine sound on one occasion after the dilatation, he felt it turn suddenly to the left, and about four and three quarter inches of the sound entered the uterine cavity. It was quite impossible to turn the concavity of the sound forwards, on account of the acute pain which it caused the patient. Dr. Biedert considers that the sound passed into the left Fallopian tube. The patient after this menstruated without pain for the first time in her life, and has since given birth to two



healthy children. Dr. Biedert draws the following conclusions. 1. Catheterisation of the Fallopian tube is possible. 2. Catheterisation presupposes a dilatation of the tube. 3. The dilatation of the tube is probably the result of an impeded or painful flow of the secretions, and especially the menstrual, from the uterine cavity. 4. In such cases, intra-uterine injections are attended with danger. 5. Back flow of the menstrual blood through the widened tube may give rise to perimetric hæmatocele. 6. In such cases, operative removal of the obstruction to the out-pour of secretions may prevent the formation of hæmatocele.

**HAMON ON THE RETROCEPS.**—In the *Journal des Sages Femmes*, Dec. 1877, Dr. Hamon remarks that the retroceps, as its name implies (*retro capio*), is devised for application to the posterior part of the presenting organ, breech or head. In the most ordinary position, the left occipito-anterior, one blade of the retroceps is applied over the frontal bone, and the other over the left temporal; not symmetrically over each temporal region, as in the ordinary forceps. When applied, the retroceps occupies the sacral hollow. The blades are united by a cross-bar. The hold on the head is secured by the marked head-curve in the blades. The retroceps is of use as an agent for ameliorating the position of the head in cases of presentation of the face, ear, anterior parietal, &c.

**GEISSEL ON MULTIPLE ECHINOCOCCUS OF THE PERITONEUM.**—In the *Deutsche Medicinische Wochenschrift*, Oct. 1877, Dr. Geissel relates a case of hydatid disease of the peritoneum which was mistaken for a multilocular ovarian cyst. Ovariectomy was resorted to, and followed by death. The patient, Frau Schmidt, aged 46, said she had been passing from the bowel clear water mixed with membranes for 9 or 10 years. On examination, there were all the physical signs of a multilocular cyst. On the 4th Jan. 1877, Dr. Geissel, at the entreaty of the patient, proceeded to the operation of ovariectomy. The incision was made from the symphysis pubis to nearly under the ensiform cartilage, and revealed the fact that the tumour consisted of hydatids of the peritoneum adherent to the abdominal walls and elsewhere; the cysts varied in size from a pea to a walnut. There were two large cysts, each of the size of a child's head, in the middle of the abdomen. Dr. Geissel removed thus 27 small and 2 large cysts. Catgut ligatures were employed to arrest the hæmorrhage, which was inconsiderable. Several cysts burst during the operation, and let out foul pus into the abdominal cavity. Death ensued five hours after the operation, which lasted two hours and a quarter.

**AIMÉ-MARTIN ON HYPERTROPHIC SYPHILITIC ULCERATION OF THE CERVIX UTERI.**—The *Annales de Gynécologie*, Nov. 1877, contains an article by Dr. Aimé-Martin, in which he describes a specific syphilitic ulceration of the neck of the uterus, together with hypertrophy of that part. He quotes Tanturri, of Naples, as having first clearly in 1862 drawn attention to this lesion. Dr. Aimé-Martin says that, usually about the third or fourth month after the reception of the syphilitic poison, the neck of the uterus undergoes a specific hypertrophy quite distinct from any other hypertrophy; it then becomes the seat of a slight ulceration on the borders of the os uteri. The ulceration is nothing more than a simple desquamation of the epithelium. Its colour

varies from a brick-red to a cherry colour. It is frequently coexistent with secondary hypertrophy of the tonsils, to which it is analogous. As regards treatment, the disease is not affected by local medication, but readily yields to the employment of general specific remedies.

**TAYLOR ON NON-SHORTENING OF THE CERVIX UTERI DURING GESTATION.**—In the *New York Medical Record* for October 13, Dr. J. E. Taylor contends that the cervix uteri does not undergo shortening during utero-gestation. He has made *post mortem* examinations at term, and found the cervix intact. The views of Leishman, Cazeaux, Stoltz, and Matthews Duncan, who all agree in the main point that the cervix disappears during gestation, are, in the opinion of Dr. Taylor, erroneous. Dr. Taylor remarks that in twenty-five *post mortem* examinations between the eighth and ninth month he found the cervix intact.

**GUENIOT ON ANO-PELVIC VERSION.**—In the *Bulletin de l'Académie de Médecine*, Oct. 2nd, 1877, is an account of a new method of version to which M. Guéniot resorts in cases of difficult trunk-presentation, complicated with uterine tetanus, where dero-tomy and evisceration of the fœtus have been recognised as useless. The process of ano-pelvic version consists in using the weight of the patient's body to introduce the hand without fatigue towards the fundus uteri; in using the pubic arch, or the sacro-coccygeal hollow, as the *point d'appui* for turning the fœtus with the aid of the finger curved like a crotchet in the rectum; and, as regards the rest of the manœuvre, in following the ordinary rules of podalic version. The advantages M. Guéniot claims for this procedure are: 1. The pelvis is generally easier to find than the feet; 2. The hold afforded by the pubic arch or sacral hollow is firm and not likely to slip; 3. The traction being direct, the force is economised; 4. The evolution of the fœtus can be affected whether the traction is towards the dorsal or the abdominal aspect of the fœtus; 5. When podalic version has failed, the ano-pelvic process permits version to be accomplished. **FANCOURT BARNES, M.B.**

**NYROP ON REMOVAL OF A CHRONICALLY INVERTED UTERUS.**—F. Nyrop (*Gynäkolog. og Obstetr. Meddelelser*, Band I.; and *Nord. Medicin. Arkiv*, Band IX.) describes a case of chronic inversion of the uterus, which had come on after labour, and had lasted six months. It resisted all attempts at replacement; and therefore, about a year after the confinement, the inverted uterus was amputated by the galvanic battery. After several attacks of peritonitis, the patient completely recovered.

**A. HENRY, M.D.**

**WEEKS ON CARCINOMA UTERI WITHOUT UTERINE SYMPTOMS.**—At a meeting of the Suffolk District Medical Society (*Boston Medical and Surgical Journal*, November 29), Dr. Weeks reported the following case.—Mrs. S., aged 46, twice married without issue, was first seen by him in August, 1877.

She had been failing about four months. From her previous history he learned that she had never suffered from uterine derangement, nor felt any of the pains that usually attend disease of that organ.

There was a large accumulation of ascitic fluid. The uterus was depressed, enlarged, and immovable. Paracentesis abdominis was performed, and nine pounds of fluid were withdrawn, after which an induration was observed in the right inguinal region, also

another in the epigastric region. The diagnosis was cancer of uterus and peritoneum.

The patient failed gradually until September 20th, when she died. In the meantime the fluid was withdrawn three times, and each time about the same quantity as at first.

At the necropsy cancerous disease of the uterus, left ovary, and peritoneum was found; yet during his attendance Dr. Weeks had at no time observed any stomach derangement, nor was pain a prominent symptom. The bladder and bowels acted freely until the last.

**ENGELMANN ON EARLY PREGNANCY SIMULATING ACUTE UTERINE AND CIRCUMUTERINE INFLAMMATION.**—In a paper in the *Saint Louis Medical and Surgical Journal* for May, Dr. G. J. Engelmann remarks that he has recently observed a class of deceptive, but fortunately rare, cases which are exceedingly liable to mislead, and in which the error in diagnosis will at least greatly protract the temporary suffering of the patient, if it do not result in serious and lasting injury. These cases generally occur at a period of gestation, in the first and second months, when it is often impossible to determine even normal pregnancy with certainty, and as in them pregnancy is accompanied by all the symptoms of acute inflammation of the uterus and its appendages, the difficulty of diagnosis is greatly increased. He relates a characteristic case, which, it appeared to him on his first examination of the patient, presented all the subjective and objective symptoms of the first stage of parametritis (pelvic cellulitis), with the usual complications of endometritis and perimetritis (pelvic peritonitis), nausea and vomiting, back-ache, hypogastric pain more marked in the one apparently tumefied side, a sensitive, somewhat enlarged uterus discharging the endometritic fluid, the fever, however, but slight; on the other hand, characteristic signs of pregnancy were wanting with the exception of the cessation of the menstrual flow. This entire group of symptoms, as proved by the termination of the case, was due to conception, and the development of the ovum in a hyperæsthetic uterus.

Two equally deceptive cases are mentioned by Dr. Fleetwood Churchill among a number cited in his paper on retention of the ovum after the death of the fœtus (*Dublin Journal of Medical Science*, lxi. May, 1876). In one case, finding a somewhat enlarged uterus, and an eroded os, he treated the patient for endometritis, and after the lapse of three weeks was surprised to observe profuse menorrhagia, followed by expulsion of a macerated fœtus. In another the enlarged uterus, with the absence of any signs of pregnancy whatever, led him to suppose the tumour due to an interstitial or polypoid fibroma until the introduction of the sound induced labour-pain, and again the expulsion of a macerated fœtus, as in the other case.

A careful analysis is necessary in such cases on account of the difficulty of diagnosis. In his case, Dr. Engelmann was assisted in the diagnosis by a history of the previous similar but very much prolonged sickness, followed by expulsion of a fœtus which had been dead for some time, and by his study of the hysteroneuroses.

The diagnosis once established, the treatment is simple and naturally follows. In milder cases, hydrate of chloral should be given per rectum to allay the nervous symptoms; but if this do not succeed, we must resort to those more energetic measures,

which the author would recommend at once in all more severe and threatening cases—the probe or the tent to hasten the expulsion of the ovum, after which speedy recovery may be expected.

**PALLEN ON INCISION AND DIVISION OF THE CERVIX UTERI FOR DYSMENORRHOEA AND STERILITY.**—Dr. Pallen (*American Journal of Obstetrics*, July 1st, 1877), after reviewing the opinions of authorities upon this subject, and giving the results of his experience, says that the operation is to be performed upon no case where any cellulitis exists, nor upon cervices of women labouring under any incurable affections of heart, lungs, liver, or kidneys, nor in surgical wards of large hospitals, nor by a surgeon who has been in attendance upon erysipela-tous, diphtheritic, scarlatinous, or puerperal diseases. With precautions against sepsis from within or contagion from without, with all of the instruments well cleansed, and with such conditions as are below mentioned, he regards incisions of the cervix as not only justifiable, but as the proper and necessary mode of treatment in the following conditions.

1. In congenital stenosis of the cervical canal, in consequence of defective development or from faulty implantation of the vagina (the small conical neck with pin hole os), the bilateral operation is indicated.

2. In acquired stenosis of the cervical canal, the result of pathological change of cervical tissue-substance, where the structure is hard in consequence of atrophy and induration of the connective tissue, with a diminution in size of the blood vessels and a permanent ischæmia (the elongated conical neck with variable os, but usually small), a condition most usually attended by enlarged body and catarrhal inflammation of the endometrium, the bilateral operation is to be performed.

3. In congenital antelexion of the neck, usually mushroom-shaped, small, indurated, and pale, with variable sized os, connected with catarrhal endometritis; and, if of long duration, fatty degeneration at the site of flexion, Emmet's posterior section of the neck with division of the knuckle at the flexure is indicated.

4. In acquired antelexion of the neck, from hypertrophic inflammation of the anterior wall of the body, or from subinvolution of the entire organ, or from posterior cervical hyperplasia, posterior section of the neck simply is required, with occasionally an additional bilateral division at the internal os.

5. In the various forms of congenital or acquired partial atresia of the cervical canal.

6. In retroflexion of the neck, usually acquired, the operation is the converse of that in antelexion.

## RECENT PAPERS.

The Effects of a Frequent and Early Use of Midwifery Forceps upon the Fœtal and Maternal Mortality. By Dr. Galabin. (*Obstetrical Journal*, Dec. 1877.)

On the Mechanism of Labour. (*Ibid.*)  
Remarks on Battey's Operation. By Dr. J. Marion Sims. (*British Medical Journal*, Dec. 8, 15, 22, 29.)

The Prophylaxis of Puerperal Fever. By Dr. Zweifel. (*Berliner Klin. Wochenschrift*, Jan. 7.)

Twenty Years' Work in the Samaritan Hospital. By Mr. Spencer Wells. (*The British Medical Journal*, Dec. 15.)

Case of Inguinal Parametritis Puerperalis. By Dr. J. Matthews Duncan. (*Lancet*, Jan. 5.)

On the Causes and Treatment of Abortion. By Dr. E. Malins. (*Birmingham Medical Review*, Jan. 1878.)

Abortion: its Symptoms and Treatment. By Dr. R. A. F. Penrose. (*New York Medical Record*, Dec. 29.)

Some Methods of Application to the Uterus for Chronic Disease. By Dr. F. D. Lente. (*Ibid.*)

The Pathology of Membranous Dysmenorrhœa. By Dr. F. Gautier. (*Annales de Gynécologie*, Dec. 1877.)



## OPHTHALMOLOGY AND OTOLOGY.

BERGH ON THE THERAPEUTIC USE OF ELECTRICITY IN OPHTHALMOLOGY.—A. Bergh (*Hygiea*, 1877, and *Nordiskt Medicin. Arkiv*, Band ix, Häft 4) has during the last ten years used electricity in the treatment of paralysis of the ocular muscles, arising from peripheric causes; of muscular asthenopia incapable of treatment by glasses or by operation; of blepharospasmus resulting from neurosis of the trigeminal nerve; and also, in recent years, of amblyopia. In the muscular affections he generally used the induction-current, in the nervous the constant current, exclusively. For stimulation of the retina, the most evident sign of which is the manifestation of phosphene, the most advantageous plan is to apply one electrode to the nape of the neck, and the other on or near the eye. By changing the direction of the current the circuit remaining closed, a more powerful irritation is produced than when the circuit is simply closed or opened, as Brenner has shown. A weak current should be used, and the remedy must be applied daily. The author has obtained much better results from the simultaneous use of electricity and injections of strychnia than from the latter alone. In speaking of hemiopia, Bergh denies that the inner or outer field of vision of one eye can be defective while that of the other is normal, just as both middle halves can be defective while the lateral ones perform their functions, provided that optic neuritis be not present. He appears also to doubt the reality of the so-called *amblyopia exanopsia*. The author naturally seeks in the first place the remote causes of amblyopia, if such can be discovered. But even in this, as in all cases when the cause of the malady remains obscure, experience has shown that the use of electricity and of strychnia, either alone or together, produces very favourable results. The prognosis, however, must always be made cautiously.

All the cases of idiopathic hemeralopia which came under treatment were cured in a very short time by electricity and strychnia. In congenital amblyopia no result was obtained. From January 1, 1874, to March 31, 1877, the author was consulted in fifty-nine cases of amblyopia, not including congenital. Of these, fifteen were treated with electricity and strychnia, four with electricity, and in all these cases improvement was produced. Two cases did not come under treatment. The remaining 38 were treated with strychnia alone; of these, 23 were not again heard of; three were improved, and 12 remained uncured.

Brief histories of 19 cases are given, showing the rapidly successful treatment of cases of advanced amblyopia, hemiopia, and recent traumatic amblyopia.

In peripheral paralysis of the ocular muscles, the anode is applied in front of the ear, and the cathode, which is small, and has a rounded end, covered with linen and moistened to the muscles, either directly to the eye itself or through the closed eyelid. In mydriasis the cathode is held to the centre of the cornea, so as not to irritate the dilator muscle of the pupil instead of the sphincter. At the same time, however, eserine is dropped into the eye.

In muscular asthenopia the electricity is either applied to each eye separately, or to both internal recti at the same time. In blepharospasmus the

anode is carried round the eye, while the cathode is placed by turns over the branches of the fifth nerve surrounding the eye. A. HENRY, M.D.

BULL ON FRACTURE OF THE SUPERIOR MAXILLA WITH INJURY OF THE EYE.—In the *New York Medical Record* for December 22, Dr. Charles S. Bull describes a case in which a man aged 30, a boot-maker, received a violent blow on the left eye with a heavy glass bottle. After giving the history of the case, Dr. Bull remarks that the interesting features in it are the following.

1. Vertical fracture of the superior maxillary bone, the line of fracture extending for some distance into the orbital floor. Fractures of this bone are almost always more or less horizontal, the line of fracture running below the malar bone. Though the break ran near the infra-orbital foramen, the infra-orbital nerve seems to have escaped injury. How the blow was struck is not certain, though it must have come from above downwards, with possibly a slant inward towards the median line.

2. Double rupture of the choroid, on both sides of the optic disc, and at about the same distance from it, in all senses symmetrical, except that in one all the layers of the choroid were not involved. The exact mechanism of such a rupture is not as yet perfectly understood. It is probable that at the moment of receipt of the injury the ciliary muscle was strongly contracted, but why this should make the choroid more brittle, as it were, and why the rupture should occur at just this spot, in the region of the macula, have never been fully explained. A single rupture of the choroid is not very uncommon, but a double rupture in the same eye is a rare accident.

3. Escape of the lens from all injury. The suspensory ligament of the lens is a very delicate structure, and it is scarcely reasonable to suppose that it would resist such extreme violence as a heavy blow directed full upon the eye, even though the force of the blow may be broken by the margin of the orbit; and yet it is not so very uncommon to meet with such cases. On the other hand, the lens has been known to be dislocated by very slight violence, and even to become opaque from concussion of the head or body. In this case not only was the lens not dislocated, but it remained transparent, and the two images of a candle flame could be distinctly made out on its anterior and posterior surfaces, when the candle was held in the ordinary way.

The other eye remained sound throughout, never showing at any time the slightest amount of sympathetic irritation.

SCHWERIN ON AN UNUSUAL FOREIGN BODY IN THE EAR.—Dr. Schwerin relates in the *Berliner Klinische Wochenschrift* for November 26 the case of a tailor's apprentice who was roused in the middle of the night by a strange noise and sensation in his left ear. The next day he tried unsuccessfully injections of warm water. When he was brought to Dr. Schwerin, he found what he took to be a beetle in lively motion deep in the ear. Warm olive-oil was dropped into the ear, and presently, after repeated syringing, he extracted with a fine hook a black beetle about four-fifths of an inch long and one-fifth of an inch wide.

W. J. TREUTLER, M.B.

MATHEWSON ON THE "DENTAL ENGINE" AS A SURGICAL INSTRUMENT.—In a report of a case of

exostosis of the external auditory meatus (reviewed in the *Edinburgh Medical Journal* for November 1877). Dr. A. Mathewson, of Brooklyn, states that in removing the exostosis he used what is known as Elliot's suspension dental engine. He gives figures showing it, and also the different drills necessary to enlarge into one the openings made. After experimenting with the instruments, and getting some appreciation of their power and the proper degree of pressure in applying them, with the assistance of Dr. William Jarvie, dental surgeon, to place and adjust (as well as to work the treadle of the engine), Dr. Mathewson proceeded to remove the exostosis. The patient was under the influence of ether. The parts to be operated upon were well illuminated by the operator using the frontal mirror. The first step was to remove the integument covering the exostosis, which was accomplished by a dental instrument known as the scaler, "the skin being circumscribed and scraped off with it". "The bony growth was then perforated at several points near its centre with the smallest of the drills, about one and a half millimetre in diameter, which penetrated without difficulty with so slight a pressure that there was but little danger of its slipping forward and injuring the deeper parts, though the growth was eburnated and excessively hard." After enlarging the opening by means of the larger drills, running the perforations together and using a little lateral pressure to reach out the meatus, an opening fully three millimetres in diameter was left, whereby a probe could be freely passed the whole length of the external auditory meatus. Much bleeding took place during the operation, which was difficult to control, notwithstanding frequent syringing and the use of styptic cotton to swab out the parts operated upon. Soft granulations sprang up, lasting for weeks, but were overcome by using nitrate of silver. Ultimately an opening nearly as large as the meatus was left. The posterior lower part of the membrana tympani could be seen, and "the hearing had risen to nearly the normal standard", from the watch not being heard "at all on the affected side"; whilst the serious symptoms, such as a sense of pressure in the head, attacks of loss of consciousness, and other cerebral symptoms, entirely ceased. Dr. Mathewson concludes his history of the case with a brief *résumé* of the history of the therapeutics of exostosis of the external auditory meatus.

#### RECENT PAPERS.

On the Use of the Ophthalmoscope in the Examination of Military Recruits with regard to Hypermetropia. By Dr. Seggel. (*Eratisches Intelligenz-Blatt*, January 8)  
From the Brain to the Ear. By Dr. E. Chenery. (*Boston Medical and Surgical Journal*, Dec. 27.)

#### DERMATOLOGY.

JAMIESON ON BILATERAL HERPES.—At a meeting of the Medical Society of Victoria, Dr. J. Jamieson described the following case (*Australian Medical Journal*, May 1877). The patient was a woman who, having been out of sorts for some time, was seized with sickness and vomiting, accompanied by severe pain in the head. Four days afterwards, red patches began to appear on the face, neck, and arms, the pain in the head and especially in the temples continuing, violent shooting pains also coming on in the chest, and between the shoulders. Dr. Jamie-

son saw her three days later, and found large patches of herpetic eruption scattered over the whole of the face and neck, extending on the chest only as far as the second rib. Both arms and hands were also covered with similar patches, which were largest on the forearms, where they became confluent to such an extent that almost the whole of the outer side was covered with one large blotch. The pains were distinctly neuralgic. Pressure on either side of the spine, in the cervical and upper dorsal regions, caused severe pain. It was about three weeks before the eruption dried up, which it did without supuration occurring at any part. The pain in the head quickly yielded under the administration of quinine and opium; but that in the back and chest was much more persistent, recurring even when the patches were healed. It was relieved by morphia in moderate doses, being apparently banished on several occasions, recurring, however, again for about a month. The case was thus one of simultaneous occurrence on both sides of Hebra's *herpes zoster faciei*, *h. z. nuchæ*, and *h. z. brachialis*, and is, Dr. Jamieson thinks, almost unique.

LEPAGE ON THE TREATMENT OF INFANTILE IMPETIGINOUS ECZEMA.—Dr. Georges Lepage has observed in M. Jules Simon's wards the good results obtained in children suffering from eczema by the method recommended by Besnier (*Bulletin de Thérapeutique*, vol. lxxxviii, p. 49), which consists in enveloping the parts attacked with India-rubber cloth. The conclusions of his paper are as follows. 1. Impetiginous eczema is a cause of debility in the child; it therefore requires prompt and active treatment. 2. Treatment by swathing is superior to all other methods. 3. The general treatment is a necessary supplement to the swathing. 4. The practitioner need not dread repercussive phenomena if the therapeutic treatment be carefully conducted.

KAPOSI ON THE SYMPTOMS AND TREATMENT OF PSORIASIS UNIVERSALIS.—Kaposi remarks (*Wiener Medizin. Wochenschrift*, Nos. 44 and 45, 1877) that the constitutional disturbance present in some cases of universal psoriasis may threaten life; and that patients cured of this aggravated form of the disease may in subsequent attacks have only the more usual localised psoriasis.

The three methods employed by Hebra in universal psoriasis to soften the epidermic incrustations, namely, the application of cod-liver oil, the continual bath, and the enveloping the body in impermeable materials, as India-rubber clothing, although very beneficial in most instances yet in exceptional cases act injuriously and even dangerously. Cod-liver oil may provoke eczema, in which case it must be discontinued at once, and dusting powder freely used. In one case it provoked a universal eruption of pustules and boils. Three days' use of the continual bath having failed to alleviate this condition, the application of diachylon ointment to the whole body was employed successfully. In another case in which cod-liver oil had produced very threatening symptoms by detaching the epidermis, the patient's life was only saved by his being immersed in water for fourteen days. When oils, fats, and water have failed, a cure has been effected by diachylon ointment and bandaging. Under the use of an India-rubber suit, in some cases very harmless and useful, the skin of the whole body may become swollen and congested to such a degree as to imperatively demand a cessation of the treatment.



REZEK ON URTICARIA AND MALARIA.—Dr. Rezek, during an experience of eighteen years in a malarial district in Hungary, found (*Allgem. Wien. Med. Zeitung*, No. 48, 1877) that, amongst an average of at least two hundred patients suffering from ague whom he saw yearly, in two or three the disease was complicated with urticaria. He himself suffered from chronic urticaria as a sequela of ague, and was definitely cured by large doses of quinine.

ZEISSL ON FEBRIS INTERMITTENS URTICATA.—Professor Zeissl, who had previously doubted the existence of urticaria as a complication of malarial fever, has now been convinced (*Allgemeine Wiener Med. Zeitung*, No. 46, 1877) to the contrary, by the observation of a case in which the eruption occurred thirteen times consecutively during the hot stage of tertian ague. It was absent during the intervals, and during the fourteenth and last attack. The patient was a single woman, aged 52, did not suffer from urticaria previously, and has not done so since.

G. THIN, M.D.

#### RECENT PAPERS.

Note on Exanthem produced by the use of Belladonna. By M. F. Dreyfus, (*La France Médicale*, Nov. 26.)  
On the Skin-Affection lately Described as Dysidrosis. By Dr. Tilbury Fox. (*British Med. Journ.*, Dec. 8.)  
Remarks on a Skin Affection lately Observed and Described as Dysidrosis, Cheiro-pompholyx, and Pompholyx. By Dr. George Thin. (*British Med. Journal*, December 8.)

### REPORTS OF FOREIGN SOCIETIES.

#### ACADEMY OF MEDICINE IN PARIS.

November 20. *The Plague*.—M. Lavitzianos read a paper on the plague at Bagdad. He admitted the existence of a certain relation between the plague and the other virulent diseases. Thus, at Bagdad, before the plague had developed itself, an epidemic of small-pox was almost always observed; and, during the plague epidemic, sporadic cases of erysipelas occurred.

November 27. *Epilepsy*.—M. Lasègue showed two patients who had suffered from epilepsy, one from eleven years of age, the other from the age of fourteen. Both of them showed, under its usual type, the deformity of the cranium to which he had called attention in a recent communication; prominence of the frontal bone on the right side, and depression of the malar bone of the same side; relative prominence of the left malar bone, and consequent torsion of the face, and obliquity of the palatine arch, of which the axis deviated towards the right. Epilepsy occurred without anterior cerebral symptoms or hereditary antecedents. The first attack was sudden, and as intense as those which followed it; these succeeded each other at short intervals.

*Disarticulation at the Hip-joint*.—In his former communication (see LONDON MEDICAL RECORD for December 1877) M. Verneuil, attributing the want of success of disarticulation at the hip-joint to loss of blood and septicæmia, recommended, for the prevention of these accidents, a special plan of operation, and a peculiar method of dressing. The plan of operation consisted in dividing the tissues in succession, and, layer by layer, tying the vessels at the same time before opening them. M. Marcelin Duval had

followed this plan during the last thirty years for most amputations; but in coxo-femoral disarticulation he made partial use of the knife to cut the large masses, and only tied the sciatic and gluteal arteries. When the operation was finished, M. Rochard, who mentioned this detail, acknowledged that M. Verneuil's method constituted a true movement in advance, but he reserved his opinion with regard to the dressing. Expanding the question, he treated of union by first intention, which M. Verneuil seemed to condemn in principle, and especially in this particular case. To prevent septicæmia, instead of bringing the soft parts into contact, M. Verneuil exposed them in their whole extent. However, union by first intention, at least as carried out at the present day, was deprived of many of the disadvantages attributed to it by the adoption of deep drainage, which allowed the rapid and complete escape of the discharges; and by the employment of cotton-wool dressing, which protected wounds from becoming infected from without. M. Rochard cited successful results obtained with it in 1855 by MM. J. Roux and Arlaud at the Saint Mandrier and Foulloiy hospitals in 1841, which he contrasted with M. Verneuil's single successful case. As regarded cicatrization and good conformation, M. Verneuil's plan did not commend itself to him. By giving to the wound the largest possible surface, large cicatrices were formed, which were easily torn; and it remained to be seen how the prothetic apparatus could be borne by a stump, of which the apex presented a central sinuous and depressed cicatrix, the depression being the cotyloid cavity itself. Finally, by so widely extending the wounded surface, a great opening was made for septicæmia; and, admitting the efficaciousness of the carbolic dressing, respecting which M. Rochard did not participate in M. Verneuil's confidence, the wound was none the less exposed to danger up to the moment of its complete healing. M. Maurice Perrin, agreeing with M. Rochard, gave preference to the mixed plan, derived from immediate union, in which, the flaps being brought together, a free communication with the bottom of the wound was established; but he was not equally favourable to the new plan of operation. Doubtless this method ought to give excellent results, but the execution of it seemed to him tedious, laborious, and precarious. The difficulty of finding the vessels, the lacerations risked in reaching them, the possibility of dividing them, and the gravity of section under these circumstances can scarcely be over-estimated. Finally, the disadvantage of uneven and unequally cushioned stumps, if the muscles had been divided at different heights, was a peril inherent to this method. They would be easily avoided by M. Verneuil's skilful management; but the same might not be the case with other surgeons, especially in the provinces, where amputations are sometimes numerous, and performed under bad conditions. The method preferred by M. Perrin was that by oval external flap, because it allowed the joint to be reached with greater certainty, and the femur to be disconnected from the surrounding soft tissues without running the risk of wounding the great vessels. At present, hæmostasis was performed according to circumstances, by compression *en masse*, if the undivided soft parts of the thigh could be easily grasped by both hands; if not, by partial and successive compression, exercised on the parts about to pass under the knife.

December 11. *Preservation of the Brain*.—M. Broca presented to the Academy, from M. Oré of Bordeaux, several brains prepared by new processes,

M. Oré first had recourse to a process which he did not describe, and which preserved the brain nearly in its original size, and left it a certain amount of suppleness. Then, owing to the isolating nature of the varnish he employed, he had been able to prepare the specimen for the galvano-plastic process, and to deposit on its surface a thick, very solid, uniform, and indestructible metallic layer, which completely enveloped it, and reproduced all its details with wonderful accuracy. He had even succeeded, by operating on each convolution in succession with different baths, in obtaining a different colouring for each of them. Up to the present time, the means of definitively preserving the cerebral convolutions had vainly been sought for.

*Gastrotomy.*—Dr. Cazin, of Boulogne, read a case of gastrotomy, performed in consequence of intestinal occlusion. He terminated his paper by the following conclusions. Gastrotomy is an operation applicable to certain cases of internal hernia from bands or twisting; in fact, those which occur suddenly, by complication. It is not necessary to know exactly the seat of the evil in order to intervene. All delay in operation diminishes the chance of success. With regard to the preference to be given to the head of incision, if there be any doubt about the point where the strangulation is situated, the incision should be performed on the median line to an extent proportioned to the difficulty of finding the seat of the malady. Parise's method, which simplifies the manipulatory measures, should be used; and there should be extreme care as to cleanliness, and Lister's antiseptic method should be followed. Unless there be any special indications to the contrary, the patient, after the operation, should be left to strict general and local rest; that is to say, the intestine should not be fatigued by disturbing treatment, such as injections and aperients.

#### ACADEMY OF SCIENCE IN PARIS.

November 12. *Milk-Globules.*—M. Bouchut read a paper on the enumeration of milk-globules. Among 158 nurses, the minimum and the maximum for each nurse varied from 200,000 to 400,000 globules, and from 4,000,000 to 5,000,000 globules in the cubic millimètre. The writer demonstrated a process of calculation, based on experiments with cow's milk, to deduce, from the number of globules, the weight of butter contained in a litre of milk.

*Red Blood-Corpuscles in Oviparous Vertebrates.*—M. Hayem presented a paper with reference to the evolution of red corpuscles in the blood of oviparous vertebrates. Colourless cells, differing from the white corpuscles, and changing into red corpuscles, were found in this blood. M. Hayem proposed to call them hæmatoblytes. These cells were mostly twice as numerous as the leucocytes. In proportion to the red corpuscles, they exist as 1 in 100 in birds, 1 in 40 in the water-adder, 1 in 50 in the Greek tortoise, 1 in 60 in green and red frogs.

November 19. *Combined Action of Morphia and Chloroform.*—M. Guibert read a note on the analgesia produced by the combined action of morphia and chloroform. In 1872 the author made known the results obtained by him in the human subject, by the combination of injection of morphia with inhalation of chloroform. He had found two very distinct conditions—1, analgesia; 2, anæsthesia. The analgesic stage began before the stage of excitement, and became complete so soon as disturbances

of the intellect manifested themselves. The phenomena of excitement were less than those occasioned by chloroform alone, and were for the most part absent. To obtain complete analgesia, an injection of from 15 to 20 milligrammes (0.24 to 0.3 grain) of morphia must be given at least fifteen minutes before the inhalation of chloroform. By moderating the inhalations, anæsthesia may be avoided in cases where the concurrence of the patient is necessary to the success of the operation.

November 26. *Tactile Corpuscles.*—M. Ranvier presented a note on the termination of the nerves in the tactile corpuscles as follows. The tactile corpuscles exist in a very simple form in the tongue and beak of the domestic duck. I studied them in the first instance in these organs, with the help of various methods, of which I cannot here give the details, but only the results. In the duck, the tactile corpuscles are abundant in the skin which fringes the beak, and in the soft papillæ, which, by their union, form an elongated pad along each side of the median and horny crest of the tongue. These corpuscles are constituted by two, three, four, or even a larger number of large cells, arranged in a regular pile one above the other. The group formed by these cells is surrounded by a lamellar capsule, and with a continuous epithelioid layer. The cells of the tactile corpuscles are globular, after the fashion of the cells of the cartilage of ossification. They contain a spherical nucleus, bounded by a double line, and furnished with one or two large rounded and refracting nucleoli. When two cells only form a tactile corpuscle they are hemispheric, and their plane surfaces are applied over one another. If there be more than two cells in a corpuscle, the two extremities are hemispheric, whilst the others show two flattened surfaces, which correspond to similar surfaces in their neighbours. In general, each tactile corpuscle receives a single nerve-tube. Having reached the single intercellular space of the corpuscle, if the latter be composed of two cells only, the nerve-tube penetrates into it, and enlarges itself by forming a disc, which I shall call the tactile disc; and here is the important point of this communication. The tactile disc has a nummular form, its edge is rounded; it is constituted by a substance apparently homogeneous under a low power; assuming a grey colour under the influence of osmic acid, and a lighter or darker violet colour under that of chloride of gold. It is flexible, and in histological preparations is often seen turned on one side, in consequence of the derangement of the tissues by the influence of reagents, or of the instrument which has been used to make the sections. Placed between the plane surfaces of the two cells of the simple corpuscle which I am at present considering, the tactile disc never overlaps them; its diameter is even inferior to that of these cells, which, touching each other beyond its edge, envelop it on all sides, and hold it as would a box, of which the bottom and the top were of the same size. When three cells enter into the composition of a tactile corpuscle, there are two tactile discs; if there be four cells, three discs. In one word,  $a$  representing the number of the discs,  $b$  that of the cells,  $a = b - 1$ . From this fact it most evidently results that the cells of the tactile corpuscles cannot be considered as terminal nerve-organs. The nerve-tube which is distributed to the discs of a tactile corpuscle, composed of  $2 + n$  cells, takes on different arrangements; a nerve-tube which has already furnished a lateral ramification to a corpuscle, divides itself, and gives out a secondary branch,



which goes on to end in a neighbouring corpuscle. On a well made section of a tactile corpuscle, made after maceration for twenty-four hours in a solution of osmic acid of the strength of 1 per cent., and afterwards treated by double chloride of gold and potassium of 1 in 10,000 parts, the cells show parallel striæ, slightly curved inwards, and of which the general direction is perpendicular to their plane surface. In the same conditions, the tactile disc appears granular when the section is perpendicular to its nerve-fibre. This granular appearance is due to the section of the fibrillæ, arising from the spreading out of the axis-cylinder. This description shows that the tactile disc—a true sensitive nervous organ—is protected against mechanical excitations, imported from without by special cells, which surround it. Hence it can only receive impressions in an indirect manner. In conclusion, I ought to add that I have studied the tactile corpuscles of the fingers of the human subject, and that the constitution of these corpuscles, though more complex, is, in every respect, comparable to that of the corpuscles of the tongue and beak of the palmpedeæ.

December 3. *Charbon*.—M. H. Toussaint read a note on the mechanism of death consecutive on the inoculation of *charbon* into the rabbit. MM. Pasteur and Joubert had come to the conclusion, from their experiments, that bacteria is the cause of *charbon*; and that it induces asphyxia by removing from the globules the oxygen necessary for hæmatosis. M. Toussaint had accepted this conclusion, until his experiments had demonstrated other facts to him. At first, rabbits submitted to an atmosphere charged with oxygen, did not show any modification in the fatal termination. The phenomena of asphyxia were identical. On the other hand, the capillaries were all full of bacteria, which formed a true injection in them. These facts therefore went to prove that asphyxia by *charbon* had a purely mechanical cause—the obstruction of the capillaries by bacteria.

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#### IMPERIAL ROYAL MEDICAL SOCIETY OF VIENNA.

November 23, 1877. *Endoscopic Examinations in Urethral Blennorrhœa*.—In connection with his paper read at the previous meeting (see LONDON MEDICAL RECORD, December, 1877) Dr. Grünfeld showed a patient who was the subject of a relatively rare form of urethritis. With the aid of the endoscope, two ulcers could be detected on the lower surface of the mucous membrane, the symptoms of which simulated gleet. This condition had been treated by various means for three years, but without success; and the ulcers were just detected by endoscopic examination two days before the patient was exhibited. One was 5 or six centimetres (2 to 2½ in.), and the other from 1 to 2 centimetres (0.4 to 0.8 in.) from the external orifice of the urethra. The former was one centimetre long, nearly triangular in shape; its posterior end was pointed, while the anterior border was 2½ millimetres broad, and appeared convex. The anterior ulcer consisted of two small stripes, ten and twelve millimetres long, and lying parallel to the urethra, one behind the other. This ulcer was situated in the fossa navicularis. The ulcers had a gray, firmly adherent, purulent covering, which contrasted strongly with the red colour of the mucous membrane.

*Progressive Muscular Atrophy*.—Dr. N. Weiss made a communication on this subject. He criticised

the myopathic theory as quite untenable, and adopted the views founded on anatomical and clinical observation of the French, German, and English authors, especially Charcot and Lockhart Clarke. He said that the pathological basis of progressive muscular atrophy is always an atrophy with degeneration of the large multipolar ganglion-cells of the anterior cornua of the spinal cord. This atrophy leads to atrophy of the muscles whose nerve-supply is derived from the diseased centre, either in consequence of the intimate relation of the cellular elements of the cord to the nutrition of the muscles, or in consequence of transmission of a chronic inflammatory process along the nerves to the muscles. The change may be primary, and is then the foundation of true progressive muscular atrophy; or it may be the result of other processes occurring in the spinal cord, and then lays the anatomical foundation of the so-called secondary muscular atrophy. All these processes are characterised by being chronic in origin and course, and by the fact that at first the disease does not at once affect large sections of the spinal cord, but single groups of ganglion-cells become affected in succession, giving rise to the characteristic phenomenon of the disease—progression. The occurrence of changes in other parts of the spinal cord, and in the peripheral nerves, is easily explained, on the one hand, by the reaction of the central processes on the peripheral nerves, and on the other hand, by the recognised fact of the transmission of chronic inflammation upwards and downwards in the spinal cord. Dr. Weiss showed a case of progressive muscular atrophy, in which symptoms of progressive bulbar paralysis were also present. The patient was a man aged 40, in whom, eighteen months previously, symptoms of paralysis and atrophy appeared in the right hand and forearm; soon afterwards, similar phenomena were noticed in the shoulder-muscles, and in the muscles of both upper arms and of the left lower limb. Eight months ago the patient complained of difficulty in chewing, swallowing, and speaking; this gradually increased. On examining the muscles, the typical atrophic condition was readily perceived; there were also, to an unusual extent, fibrillar twitchings of the muscles, especially the atrophied ones, which, when the patient was stripped, presented an appearance of undulation. The entire absence of disturbances of sensation and of the function of the automatic centres, as well as the course of the disease, enabled an easy and sure diagnosis to be made. Further disturbances, however, were observed, affecting the muscles of the lips, tongue, soft palate, pharynx, and larynx. In all these muscles Dr. Weiss demonstrated the existence of paralysis, and its concomitant disturbance of function. Regarding the tongue, he called attention to its remarkable atrophy, the wrinkling of its upper surface, its spongy feel, and to the vermiform motion produced by fibrillar contractions in its muscular substance. The right palatine arch was broader than the left; the point of the urula was distinctly directed towards the left. The function of the pharyngeal constrictors was so much impaired that, in swallowing, the patient was obliged to make several efforts before he could bring the morsel within the reach of the involuntary muscles of deglutition. On laryngoscopic examination, the arytenoid cartilages were seen to be approximated very slightly during phonation, and the vocal chords, even in forced utterance of the letter *i* (English, *ee*) were not completely brought together, but left a long elliptical space between them. The reflex irritability of the mucous membrane of the

pharyngeal mucous membrane was also much diminished; it could be irritated as far as the entrance of the larynx without producing a feeling of choking. On what this depended, could not be ascertained with certainty; it was not, however, due to anæsthesia, as the patient felt distinctly when the part was touched. The functions of mastication, deglutition, and speech were impaired. The patient had difficulty in forming solid food into a mass; some portions remained on the tongue, others fell into the recesses between the cheek and gum, from which they could not be dislodged by the tongue. In repeating the alphabet, the vowel *i* was pronounced as *e*; among the consonants, *k* and *g* were pronounced as *ch* (guttural), *p* as *w* (=v); and the sounds of *q* and *n* were confounded. The utterance of other vowels and consonants, in speaking several words or sentences, was also imperfect, but less so than that of the above mentioned letters. The difficulty of raising the tongue to the palate prevented the pronunciation of *k*, *g*, and *i*; and the impossibility of pressing the lips together prevented the utterance of *p*. The greater indistinctness in uttering words and sentences was due to the fact that the patient was obliged to subdivide his nervous energy, while he could concentrate it on the pronunciation of single letters. There was no marked increase of the salivary secretion; the patient was obliged to spit it out frequently, but this was because he could not swallow it. There were no disturbances of respiration.—Dr. B. Schultz remarked that, even in that stage of the disease in which difficulty of digestion had become extreme, he could produce complete movements of swallowing by irritating the hypoglossal nerve of one side by means of the cathode.—Dr. Weiss said that in his patient he had been able to produce powerful movements of deglutition, by applying the cathode over the hyoid region.

*Cholesteatoma*.—Dr. Heschl made some remarks on the occurrence of the form of tumour within the skull, and its influence on the brain, which in some cases is scarcely perceptible, while in others it is strongly marked. He then commented on the prevalent views as to its nature, and sketched its anatomical and histological characters. There is an extraordinary divergence of opinion as to the nature of the tumour; more authors regarding it as degenerated lipoma, while others (as Vulpian) consider that it belongs to the class of epithelial cancer. Dr. Heschl expressed the opinion that the tumour results from a proliferation of the epithelioid lining of the arachnoid and pia mater.

Nov. 30. *Mottled Kidney*.—Dr. Heschl showed a kidney in which yellow streaks and points were seen in the grey connective tissue, and which at the same time presented the ordinary microscopic appearances of Bright's disease. Following Rindfleisch, he designated this as the mottled kidney. In examining several such cases, he had found that the yellow streaks and points did not arise, as in Bright's disease, from fatty degeneration of the epithelium of the urinary tubules, but that, while the latter retained their normal condition, fat was accumulated in the adjoining interstitial connective tissue, partly in the molecular form, and partly in granular cells. He was of opinion that in such cases there was either a natural injection of the lymph-passages, or a chronic inflammation in the interstitial connective tissue. In his experience, these cases were somewhat rare. Clinically, they presented the symptoms of Bright's disease.

*The Blood-Supply of the Forearm*.—Dr. von Basch

showed an apparatus for the volumetric determination of the blood-supply of the forearm. He showed by experiment that the bulk of the forearm is reduced by the inspiration of compressed air, and increased by the inspiration of rarefied air.

December 7. *Horny Growth*.—Dr. von Dumreicher showed a cutaneous horn of unusual size, which he had lately removed from the skin in the region of the first dorsal vertebra.

*Paralysis of the Insane, and Cerebral Syphilis*.—Dr. Leidesdorf made a communication on this subject, and exhibited patients. He gave a brief sketch of the clinical history of the disease and its pathological conditions, referring especially to the recently assumed doctrine of the participation of the sympathetic. He further remarked that a number of other cerebral diseases—tumours, hæmorrhagic pachymeningitis, sclerosis in patches, chronic alcoholism, and especially syphilis—produced similar symptoms. In many cases the diagnosis of the disease from syphilis is very difficult; it can, however, be made when, along with the symptoms of diffuse disease of the brain, there are also indications of localised disease, such as paralysis of single cerebral nerves; these are of frequent occurrence in cerebral syphilis, while they are not met with in paralysis of the insane. Dr. Leidesdorf related three cases of cerebral syphilis which he had had an opportunity of observing. In them, symptoms of the most severe form of paralysis of the insane appeared; in one of the patients recovery occurred, and had already lasted more than ten years; the other two had died, one by suicide, and the other by epilepsy. Dr. Leidesdorf referred to the latest researches on cerebral syphilis, and especially those of Heubner, who first pointed out the syphilitic degeneration of the cerebral arteries. According to him, this commences in the greater vessels, and spreads to the smaller ones; it attacks by preference the basilar artery and the arteries forming the circle of Willis, and consists essentially of the development of a granulation-tissue—like syphiloma—between the epithelioid lining of the arteries and the fenestrated membrane of the inner coat; its elements do not undergo fatty or calcareous degeneration, such as usually occurs in the deposits arising from endarteritis. This new growth in the wall of the vessel tends to narrowing of the lumen; and this may very well account for the severe cerebral symptoms in syphilitic patients, and for their frequently rapid disappearance under specific treatment. He had found the degeneration described by Heubner in the case of cerebral syphilis in which death had occurred from epilepsy. A work by Friedländer had also recently appeared, in which, under the name of obliterative arteritis, a diseased condition was described as occurring in non-syphilitic persons, in which the changes were almost identical with those described by Heubner. In conclusion, he showed two cases, in which, although syphilis could be excluded with certainty in both, recovery from paralytic psychical disturbance had taken place. In one it was complete; in the other, paralytic myosis still remained.

*Lichen Ruber Planus*. Dr. Kaposi showed a case of lichen ruber planus. The patient was a man aged 36, who had had the disease four months. It was the second case in which he had seen pure lichen planus so widely spread. In the patient exhibited, the left arm was uniformly red, as in eczema rubrum, but the grouping together of the papules was evident. The thorax also, in front and



behind, was covered with confluent papules; isolated papules and patches were found on the neck, extending on the cheeks, on the wrists, the penis, the left palm, and in the lower limbs from the pelvis downwards.

December 14. *Dermoid Ovarian Cyst*.—Dr. von Dumreicher made a communication on an operation which he had performed two days previously. On July 11, he had removed a cyst of the left ovary from a young woman, aged 18, and had recently found behind the linea alba a movable elastic swelling as large as a child's head, and penetrating distinct fluctuation. On account of the mobility of the tumour, puncture was impossible, and Dr. von Dumreicher proceeded to extirpate it. An incision having been made along the linea alba, the cyst was seen. It contained more than 500 grammes (about a pint) of dirty yellow fluid, as well as solid matter, consisting of masses of fat in which hairs were embedded; in its walls also hairs were found, and traces of daughter-cysts. The cyst arose from the right ovary, and the pedicle was twisted four times on its axis. The patient was, so far, doing well. In this case, the rapid development of the dermoid cyst was remarkable. When Dr. von Dumreicher examined the patient five months ago, the right ovary was quite normal.

*Syphilitic Lupus*.—Dr. Kaposi read a paper on this subject.

*Syphiloma of the Pons Varolii; with remarks on Unilateral Cerebral Anæsthesia and Disturbance of the Senses*.—Dr. Rosenthal described the case of a man aged 46, at first an out-patient and afterwards an in-patient of the General Hospital, who, since January 1876, had been the subject of severe headache, vertigo, and loss of sensation in the left cheek. Six months later there were observed ptosis of the left eyelid, paralysis of the abducens, diplopia, convergent strabismus, and paralysis of the trigeminal nerve (outer and inner branches) affecting the conjunctiva, sclerotic, and cornea; there was loss of sensation in the two anterior thirds of the tongue on the left side; the glosso-pharyngeal region was unaffected. The diagnosis of a new growth in the pons Varolii was confirmed in August by the occurrence of paresis of the right side. The varying character of the paralysis of the ocular muscles caused syphilis to be suspected, although the patient denied that he had ever had the disease, and no indications of it could be found in the genital organs or glands. He took iodide of potassium (45 grains in two days) for four weeks. At the end of September 1876, the right hemiplegia had improved, but was followed by left hemiplegia. He was placed in one of Dr. von Bamberger's clinical wards, where he died on February 18 with symptoms of impeded deglutition and articulation. At the necropsy, the pons Varolii was found to contain several foci, mostly confluent, in the neighbourhood of which the substance was replaced by a greyish, rather soft mass, and partly by a dry substance having the appearance of cheese; most of the nerves at the base had undergone partial grey degeneration; the arteries at the base were in a normal condition. The liver was adherent by its convex surface to the diaphragm by several bands of connective tissue; it was rather small, and its capsule, especially at the convexity, was much thickened, and cicatricial bands passed from it into the substance of the liver. A microscopic examination of the new growth made by Dr. Chiari revealed the presence of the elements of syphiloma, numerous nuclei and round cells in a basis of fibrous tissue, as well as

secondary descending degeneration of the antero-lateral columns. On examination during life of the anæsthetic anterior left third of the tongue, there was found to be complete loss of taste for concentrated solutions of sweet, acid, and salt substances; while even weak bitters were tasted. Galvanic examination, by means of the application of fine isolated electrodes to the tongue, as also by the conduction of the current from the parotid and laryngeal regions, produced on the right half of the tongue a metallic taste with from eight to fifteen of Siemens's elements, while on the left half only a moderate taste was produced by twenty-five or thirty such elements. In two cases of hysteria which Dr. Rosenthal had observed in the practice of Dr. Scholz, left hemiplegia and hemianæsthesia set in, and extended over the whole region applied by the left trigeminal nerve, as well as the whole left half of the tongue. The sense of taste was completely lost, and only a feeble sensation was excited by a current of from sixteen to twenty elements; when the stimulant was conveyed through the parotid and larynx, thirty to thirty-five elements were required to produce any effect. The right half of the tongue preserved its gustatory power for some months, but it at last disappeared here also. In one case, the right half of the tongue (the taste being totally lost) remained for several days sensible to pricking, while the application of ice to the same part, as well as to the corresponding half of the face and chest, was not perceived. In order to test the irritability of the brain in the three cases mentioned above, Dr. Rosenthal applied a galvanic current through the corresponding halves of the occiput and forehead; on the healthy side, from 15 to 18 elements produced giddiness, metallic taste, and phosphene: on the anæsthetic side of the head no effect was produced by 40 elements, beyond a slight flashing in the eye. In six cases of rheumatic paralysis of the face, the author found the taste normal in the mild cases; in the more severe forms (with loss of nervous irritability and degeneration in the muscles) the sense of taste was impaired, in some quite lost: the galvanic gustatory reaction was little if at all diminished. In the severe cases of facial paralysis which recovered, the return of taste was among the first signs of improvement; but several weeks elapsed before the perception of sweet, salt, and latest of all, acid substances, was regained. The author concluded from numerous experiments that the galvanic examination of the sense of taste afforded more delicate and certain results than the ordinary methods. If, when the normal sense of taste is lost, the galvanic reaction be but at all or but little changed, an affection of the peripheral gustatory fibres is indicated; while, if the galvanic reaction be considerably diminished, the loss of sensation most probably has its origin in the conducting nerve or in the centre. The assumption of intracerebral disease becomes a certainty, when, in cases of complete loss of taste, no effort on the sense is produced by galvanic stimulation of the corresponding side of the head.

December 21. *Malformation of the Arms; Cardiac Hypertrophy*.—Dr. Winternitz showed a young man, aged 17, the subject of hypertrophy of the heart and the upper limbs. The right upper arm was imperfectly developed; the left was wanting; and there were no thumbs. The left side of the heart was most hypertrophied, and the pulse in the arms was defective. In Dr. Winternitz's opinion, there was a narrowing of the aorta, in consequence of which the upper limbs were imperfectly nour-

ished, and became malformed. The patient was an artist, and, notwithstanding his deformity, could execute very difficult drawings with the greatest accuracy.—Dr. Skoda, after examining the patient, expressed the opinion that the case was not one of stenosis of the aorta, but of insufficiency of the mitral valve, and that there was no causal connection between the shortening of the limbs and the change in the vascular system. If such a connection existed, how was it that the lower limbs were normally developed?—Dr. Heschl also denied the existence of any connection between the cardiac affection and the malformation of the arms.

*Sympathetic Ophthalmia.*—Dr. Mauthner observed from his own experience and that of others, that injuries in the neighbourhood of the ciliary body may run a perfectly favourable course; further, that after recovery from cyclitis, sympathetic disease of the other eye may set in; and also that operation may, and in many cases must, be performed during the acute stage of the sympathetic disorder. He discussed the indications for enucleation of the injured eye; and concluded with some remarks on the pathology of sympathetic ophthalmia.

## REVIEWS.

### *An Inquiry into the General Pathology of Scurvy.*

By CHARLES HENRY RALFE, M.A., M.D. Cantab., Senior Physician to the Seamen's Hospital (late Dreadnought); Teacher of Physiological Chemistry in the Medical School of St. George's Hospital. (Reprinted from the *Lancet*.) London: H. K. Lewis. 1877.

Dr. Ralfe has utilised his now almost unique opportunity of observing scurvy, to make some useful investigations into that curious and obscure disease, and has further improved the occasion by making direct experiments on the effects of a scorbutic diet. He points out in his pamphlet how little is really known of the pathology of the disease, although the cause is perhaps better established than that of any other. He makes a brief reference to Mr. Busk's analyses, and to Garrod's potash theory, and gives reasons against the latter, such as the uselessness of beef-tea as a curative agent, although it contains actually more potash than an efficacious ration of potato or lime-juice. He then refers to Dr. Buzzard's suggestion that it is the combination of the organic acids and potash, although not either alone, that produces the requisite material. Dr. Ralfe further extends this hypothesis from his own observations, and says, "that the primary alterations in scurvy seem to depend on a general alteration between the various acids, inorganic as well as organic, and bases found in the blood, by which—(a) the neutral salts, such as the chlorides, are either increased relatively at the expense of the alkaline salts; or (b) that these alkaline salts are absolutely decreased." He then proposes to consider the physiological and pathological effects of scorbutic diets, and how far these correspond with the chemical composition of the latter, with a view of determining how the disease is brought about, whether by physical agency, as from the withdrawal in bulk of some special constituent, or by some chemical alteration (as, for instance, diminished alkalinity) of the blood.

He gives a table of the urine of a healthy person on mixed diet, and also the analysis of the urine of the same person after 18 days' withdrawal of succulent vegetables. The effects of the scorbutic diet were an *increase* of water, of free acid, of urea, of uric acid, of chlorine, of earthy phosphates, of soda, and of sulphuric acid; a *decrease* of alkaline phosphates and of potash.

Another table gives four analyses of urine of actual scurvy cases, giving also the normal and actual weights of the patients. There was a diminution of the solids, urea, phosphoric acid, and acidity, with an increase (not quantitatively determined) of the uric acid. The urine was scanty, and the body weight about 15 to 20 per cent. below the normal.

Dr. Ralfe points out that the diminished acidity of the urine is quite compatible with diminished alkalinity of the blood; for the acidity of the urine depends upon the inter-decomposition of the bicarbonate of potash or soda with the neutral phosphate, giving rise to carbonate and acid phosphate. Now the conditions inducing scurvy necessarily diminish the carbonic acid and the neutral phosphates. With improved dietary and restoration of strength the acidity of the urine invariably increases, and sometimes exceeds the normal.

Another table gives the analyses of the urine: 1. Of a severe uncomplicated case of scurvy on a diet liberal but without antiscorbutics; 2. Of the same case on the same diet, but with the addition of six ounces of Trommer's liquid extract; 3. Of the same case with a liberal and antiscorbutic diet, consisting of 8 oz. meat, 12 oz. bread, 4 oz. potatoes, 8 oz. lime-juice, and 4 oz. of cabbage. (N.B.—The amount of lime-juice seems large.) The main points of change were, a marked increase in free acidity and alkaline phosphates, and a considerable decrease in chlorides.

Table v compares the diet of the English sailor and soldier, showing that the latter has a better antiscorbutic diet than the former. Table VII shows the constituents of the ash of the articles of diet; and Table VIII gives the relative quantities of those constituents. These show the superiority throughout of the diet of the soldier.

He then proceeds to inquire whether it be the withdrawal of some special constituent necessary for the nutrition of the blood and tissues, or some chemical alteration in the quality of the blood, that produces the scorbutic taint. That it is not the former is seen by the fact that a starving man living on roots and berries never gets scurvy, whilst the most liberal diet of meat without fresh vegetables is no preventive. His conclusions are these.

1. The primary change is a chemical alteration in the quality of the blood.

2. This is a diminution of its alkalinity.

3. This is produced, in the first instance (physiologically), by an increase of acid salts (chiefly urates) in the blood, and, finally (pathologically), by the withdrawal of salts having an alkaline reaction (chiefly alkaline carbonates).

4. This condition produces dissolution of the blood corpuscles and fatty degeneration of the muscles and the secreting cells of the liver and kidney, just as in the case of animals when attempts are made to reduce the alkalinity of the body, either by injecting acids into the blood, or by feeding them with acid salts.

F. DE CHAUMONT, M.D.



*Treatment of Diphtheria.* By E. N. CHAPMAN, A.M., M.D., late Professor of Obstetrics, etc., L. I. College Hospital. (Reprinted from *Buffalo Medical and Surgical Journal*, October 1877).

Dr. Chapman, of Buffalo, has written a pamphlet bringing under the notice of the profession his method of treating diphtheria, as practised by him during the last fifteen years, and alleges that his plan of treatment "has been crowned with a success that throws every other mode of treatment, however pretentious, into the shade". His facts are derived from the experience of 85 cases which have come under his treatment during the last three years, the results of which are compared with those found in the returns of the Board of Health for the city during the same period. The general mortality from diphtheria in the city was about 1 in 3 cases, while Dr. Chapman claims a mortality of only 5 per cent.

The curative agents mainly relied on are alcohol, quinine, and iron. Under ordinary conditions, alcohol is a stimulant to the circulation, but the author states that in diphtheria it loses this property: a dose which in health would produce intoxication having no excitant effect, no odour being perceptible in the breath until the disease begins to yield. Alcohol, says he, is as much a specific for the diphtheritic poison as quinine for the malarial, the analogy also holding good as to its prophylactic qualities. One argument in favour of the specific action of alcohol is that, according to the author's experience, diphtheria never attacks those habituated to the use of spirits. Dr. Chapman considers "that alcohol counteracts, neutralises, or destroys the poison (of diphtheria), whatever it may be, acting in fact like a true antidote, if promptly and liberally given, so that the membrane falls and does not reappear directly the blood fails to offer the proper pabulum for its continued growth."

The use of quinine to the point of cinchonism is recommended as an adjunct to the alcoholic treatment, while iron may be given during the period of convalescence.

Most of the assertions made in this monograph are purely empirical, and the statements are supported by only six detailed cases and a few irregularly quoted statistics. In the author's opinion, "the revelations of necropsy, the researches of chemistry, the flights of theory, and the dictations of reason, are of little avail in the face of the enemy, when the urgent practical question, the empirical fact, what will cure the patient, waits a solution".

In considering practical therapeutic measures, we are often obliged to be satisfied with empirical facts, but when recording experience in the treatment of a certain disease, it is at least necessary to give evidence that the disease under treatment is that under discussion. Now Dr. Chapman speaks in a very loose way of the disease diphtheria and diphtheritic diseases. Laryngeal symptoms are but little referred to, and the disease is spoken of as one attended with high fever, and two of the cases quoted presented scarlatinal rash. Were all the cases statistically recorded what we term cases of diphtheria?

Although we can hardly expect as good a result as Dr. Chapman has met with, still his plan of treatment appears well worthy of trial.

FRANCIS WARNER, M.D.

*Practical Gynecology: a Handbook of the Diseases of Women.* By HEYWOOD SMITH, M.A., M.D. Oxon., M.R.C.P.Lond., Physician to the Hospital for Women, and to the British Lying-in Hospital. London: J. and A. Churchill. 1877.

The author states in the preface that his "object in the present work has been to present the busy practitioner with a book systematically arranged, burdened with no discussions on vexed questions of pathology, and giving at a glance the salient points of diagnosis and treatment with clearness and brevity". If these are good objects to be aimed at, the author may be congratulated upon having successfully attained them. The following extract upon utero-vesical fistula gives a fair idea of the mode in which the different diseases of women are dealt with.

"UTERO-VESICAL FISTULA.—*Definition.*—A fistulous opening from the bladder into the uterus above the vaginal attachment. *Causes.*—Prolonged pressure, injury, abscess, ulceration. *Symptoms.*—Flow of urine from os uteri. *Signs.*—Bladder-sound can be passed into the uterus and felt there. *Diagnosis.*—By symptoms and signs. *Prognosis.*—Unfavourable. *Treatment.*—Closure of the os uteri after the menopause."

There is an appendix of remedies at the end of the book, which is a very good and useful feature, and will no doubt be of value to practitioners.

FANCOURT BARNES, M.B.

*Traitement du Rhumatisme, de la Goutte Aigue et Chronique, et de Diverses Affections du Système Nerveux, par le Salicylate de Soude.* By Professor G. SÉE. Paris: 1877.

Those interested in the history and use of salicylate of soda will profit much by a perusal of this short memoir. After speaking of its chemistry, physiological action, and its influence on fermentation, the author describes at some length the results obtained by using it as a remedy in the above-mentioned and other affections. He believes that neither salicylic acid nor salicylate of soda is of any special use as an antipyretic, but that in acute articular rheumatism very decided results are observable, especially when salicylate of soda is used. By administering 10 grammes (150 grains) dissolved in 200 grammes of water during the twenty-four hours, cases of acute rheumatism were cured in from two to four days.

But, as the salt is rapidly eliminated from the system, it is necessary to continue its use for ten or twelve days, otherwise relapses would be certain to occur. In the cases treated, it was noted that the fever never disappeared before the complete cessation of pain, indicating that the fever is more probably the effect, and not the cause, of the localisations. Further, this treatment removes the anæmia; and, if used at the onset of the disease, it prevents the occurrence of internal fevers. It has, however, no influence on pre-existing lesions of the heart. In chronic rheumatism, the attacks of pain cease as rapidly as in acute rheumatism. In acute gout the pain, swelling, redness, etc., all disappear in two or three days; and even in chronic gout, when used continuously in moderate doses, it is useful in keeping away all acute attacks.

Though it has not yet been found of much use in relieving facial neuralgia or sciatica, in cases of locomotor ataxy it is said to relieve the pain better

than morphia and chloral, but its use causes a certain amount of weakness and noises in the ear, and narcotism may ensue.

J. C. EWART, M.B.

*On the Employment of Prepared Cotton-Wool as a Substitute for Sponges and Charpie.* By M. KIRMISSON. Paris, 1877.

M. Kirmisson draws attention to the valuable uses to which cotton-wool may be put in surgical practice, and especially as a substitute for sponges and charpie.

In this country where, in all well regulated hospitals, the dressing sponges when not in use are constantly steeping in carbolic acid solution, the need for a substitute for them may not be so urgent; although much reform is still undoubtedly called for in the mode of dealing with sponges in surgical wards. But in other countries, we believe from personal observation, that the remissness in this respect is far greater, and that, until scrupulous cleanliness becomes more of a fixed national habit, the entire abandonment of the use of sponges in surgical dressing would be very desirable.

As to charpie, it is comparatively not much used in England. But on the continent, where it is extensively employed, the mode in which it is prepared, and its general manipulation until it reaches the wound, are all strongly open to objection. In Germany we have used it wholesale ourselves and have seen it largely used, and this thought has often occurred to us. In France the case is the same, and the author of this paper alludes to some of the objections to its employment, which, until a total reform is effected in its production, condemn it fully. At the same time, there could hardly be a better dressing than good *clean* charpie.

M. Kirmisson divides his remarks on the use of prepared cotton-wool into: 1. The mode of preparation of the wool designed to replace sponges and charpie; 2. The mode of using this preparation as a sponge; 3. The way in which it may be employed as dry charpie, or as soakage padding; or for application variously medicated.

1. Sheets of cotton-wool are cut into quadrilateral pieces about the size of the hand, and these are plunged into a basin of water or carbolic lotion (1 in 100), and there left for five or six minutes, being frequently turned over and pressed until they have fully imbibed the liquid. They are then taken out and subjected to strong pressure, after which they are rolled into balls. These balls are then kept for use in well corked wide-mouthed bottles.

2. These balls may now be used as ordinary sponges, and will be found according to the author to possess all the desirable properties of the latter, of absorption of fluids, &c., with the additional advantage of being less costly though each one only be used for a single case and then thrown away. Cotton-wadding, too, may often be at hand when suitable sponges are not.

3. As regards its use as a dressing for and around suppurating wounds, &c., nothing special need be said except that M. Kirmisson believes it admirably suited for the imbibition of discharges, &c., while its antiseptic properties also recommend it.

Besides carbolic acid solution, it may be impregnated with a number of other fluids, *e.g.*, solution of perchloride of iron; when, treated by pressure in the same way, it becomes an excellent hæmostatic which may be kept for hurried use.

On the whole, we regard the suggestion of the use of cotton-wool in the way described as one which might be found very useful in many cases.

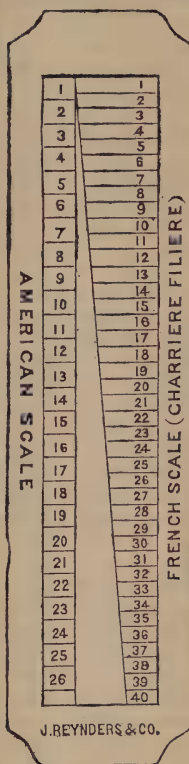
A. E. BARKER.

## NEW INVENTIONS.

### A NEW CATHETER-GAUGE.

The accompanying cut represents (half size) a simple, convenient, and accurate "Catheter-Gauge", constructed on a somewhat novel principle.

It consists of a metal plate, at least 3 *millimètres* in thickness, perforated by a triangular (right angled) opening, of which the base is 0.545 inches (13½ *millimètres*), and the altitude 6.666 inches. The edges of this opening (which should be perfectly straight and true) are divided, beginning at the apex, into equal parts by a series of parallel lines ¼ inch apart for the Van Buren scale, and ⅓ inch apart for the Charrière. On the reverse side of the plate the divisions of the English scale are approximated as follows:—



No. 1, English	=	No. 7, Charrière
" 2	" = "	8
" 3	" = "	9
" 4	" = "	11
" 5	" = "	12
" 6	" = "	15
" 7	" = "	16
" 8	" = "	17
" 9	" = "	18
" 10	" = "	19
" 11	" = "	20
" 12	" = "	22
" 13	" = "	23
" 14	" = "	25
" 15	" = "	26
" 16	" = "	27
" 17	" = "	28
" 18	" = "	30

At present Dr. Henderson has the gauges made of hard brass, nickel-plated, by John Reynolders and Co., of New York.

### A NEW LARYNGEAL TUBE.

This tube, the invention of M. Ribemont, house-surgeon in the Maternité Hospital at Paris, was recently submitted to the Academy of Medicine by M. Tarnier. It offers two great advantages over the tubes hitherto employed; the first being a more easy power of introduction, in consequence of a particular



curve given to the instrument, and of the rounded blunt end with which it is provided. The second



advantage of the tube is the following. In the course of insufflation, performed with M. Depaul's tube, the air flows back over the sides of the tube; and, to prevent this, it is necessary to close the nose and mouth, so that the whole of the insufflated air may penetrate into the trachea and the bronchi. This is a complex and delicate manœuvre, which singularly complicates the operation. There is likewise another drawback; the tube is frequently introduced into the œsophagus, and the air is insufflated into the stomach and intestines; consequently the diaphragm is raised, which constitutes an additional danger of asphyxia. The conical form of the end of M. Ribemont's tube has the effect of completely obliterating the laryngeal orifice, and consequently prevents the reflex of air over the sides of the instrument. M. Ribemont's tube therefore offers three advantages over all other tubes. 1. Its curve and its end render its introduction more easy. 2. Its conical form has the effect of filling the cavity of the larynx, and consequently of avoiding the necessity of closing the mouth and nose. 3. Finally, its arrangement is such that the operator is immediately made aware when it is well introduced into the larynx, and not into the œsophagus.

#### LOBB'S PATENT DRIED MILK-FOOD.

Mr. Lobb of Langley Food Works, Vauxhall, has successfully introduced into commerce several forms of milk-food, of which he is the patentee and manufacturer. They comprise dried milk, in combination with other nutritious matters, such as oatmeal, arrowroot, cornflour, rice, cocoa, and chocolate. The analysis made by Dr. H. C. Bartlett, of Mr. Lobb's patent milk-food shows its composition to be, moisture, 2.73; nitrogenous matter, 11.47; cane-sugar, corn-sugar, gum, etc., 20.07; sugar of milk, 15.09; milk-fat and fat from corn, 8.90; starch and cellulose, 30.78; ash, 1.96. Thus it will be seen that the article partakes largely of valuable nitrogenous and fatty matters. Care is taken to obtain for these articles milk of exceptional richness, and the process of preparation is so carefully carried out as to secure perfect freedom from adulteration. These foods are sold in the form of a powder, and will stand the test of time and climate without deterioration. The practical tests to which we have submitted these foods, show that they contain all the essential principles of nutrition in fair proportions; and we can therefore, without hesitation, recommend them to persons who require nourishing food. At the same time, they are convenient for use, being prepared in a few minutes by the simple addition of boiling water. Nothing better could be desired as a beverage than the cocoa or chocolate, and they will be hailed as a boon by all who appreciate a genuine and palatable article; while the milk-food and arrowroot, and other farinaceous foods are well calculated to play an important part in the diet of the child and of the sick.

#### MONTAUBAN'S CHOCOLATINE.

This preparation of cacao claims attention by its good flavour and perfect solubility. Described by the proprietors as comprised of cacao and sugar only, the qualities we have pointed out are corroborative of the statement. The valuable properties of cacao as a nerve-stimulant and in the repair of waste of the animal economy, are too well known to need recapitulation here. Suffice it to say that the large number of persons who now wisely use it in

one or other of its various forms as a daily beverage, will find Montauban's chocolatine both agreeable and nutritive in a high degree.

#### RECENT GERMAN BOOKS.

- Die Krankheiten des Magens, klinisch und mit besonderer Rücksicht auf Hygiene und Therapie bearbeitet. Von H. Lebert. Tübingen, 1878. H. Laup.
- Lehrbuch der allgemeinen Pathologie für Studierende und Aerzte, von Dr. M. Perls. I. Theil. (Allg. pathol. Anatomie und Pathogenese.) Giessen.
- Laryngoskopischer Atlas, enthaltend 61 Figuren auf 10 Tafeln in Farbendruck. Nach der Natur gemalt und erläutert von Dr. Ernst Burow, Privatdozent in Königsberg.
- Lehrbuch der praktischen Medizin, von Dr. F. C. Kunze. II. Band. 3. Auflage. Leipzig, Veit und Co.
- Grundriss der Materia medica für prakt. Aerzte und Studierende. Bearbeitet von Dr. Herm. Köhler, Prof. in Halle. Leipzig, Veit und Co.
- Lehrbuch der gerichtlichen Medizin. Von Dr. Ed. Hofmann. 2. Hälfte. Wien, Urban und Schwarzenberg.
- Grundriss der Physiologie des Menschen, von Professor Dr. L. Hermann. Sechste ungebraute und verbesserte Auflage. 1877. gr. 8. Mit Holzschnitten, 153 Bogen. kl. 8. brosch.
- Handbuch der Frauenkrankheiten unter Redaktion von Professor Dr. Billoth in Wien. Sechster Abschnitt. Professor Dr. Olshausen in Halle: Die Krankheiten der Ovarien. Mit 33 in den Text gedruckten Holzschnitten.
- Lehrbuch der Militär-Hygiene, von Dr. C. Kirchner. Mit 88 in den Text gedruckten Holzschnitten und 8 lithogr. Tafeln. Zweite gänzlich umgearbeitete Auflage.
- Handbuch der Allgemeinen Pathologie als pathologische Physiologie, von Professor Dr. Samuel in Königsberg. II. Abtheilung. Allgemeine Hämö-Thermo-Neuro-Pathologie.
- Physiologische Chemie, von Dr. F. Hoppe-Seyler. I. Theil: Allgemeine Biologie. Mit 4 Holzschnitten, 1877. II. Theil: Die Verdauung und Resorption der Nährstoffe, 1878.
- Die cerebralen Grundzustände der Psychosen. Von Assistent Dr. Weiss, Stuttgart. Enke, 1877.
- Die galvanocautischen Apparate und Instrumente, ihre Handhabung und Anwendung. Von Prof. Dr. Vict. V. Bruns. Mit 28 Holzschnitten und 42 Figuren. Tübingen, 1878. H. Laup.
- Verbreitung und Wanderung der Cholera, graphisch dargestellt nach Beobachtung der grossen Seuchenzüge durch Indien, dann weiter durch Asien und Europa. Von Dr. Fr. Schneider. Mit 5 Karten. Tübingen, 1878. H. Laup.
- Die Conservirung der Thier- und Pflanzenstoffe (Nahrungsmittel, etc.). Von Dr. Stanisł. Mierzinski. Mit in den Text gedruckten Holzschnitten. Berlin, 1878. Jul. Springer.
- Die Desinfectivmittel. Von Dr. Stanisł. Mierzinski. Mit in den Text gedruckten Holzschnitten. Berlin, 1878. Jul. Springer.
- Bericht über den Typhus exanthematicus in Wien im Jahre 1875, dem n.-ö. Landes-Sanitätsrathe erstattet von Primararzt Dr. L. Oser. (Separat-Abdruck aus der Med. Jahrb.) Wien.
- Ueber Krankvereine und Vereinsärzte in Budapest. Von Dr. Samuel Lindner. Budapest, Zilahy.
- Bericht über die chirurgische Abtheilung des hauptstädtischen Baraken-Spitals. Von Prof. Emerich Navratil. Budapest.
- Vom Bewusstsein in Zuständen sogenannter Bewusstlosigkeit. Vortrag von Dr. J. L. A. Koch.
- Die Echinococcuscysten der Nieren und des perinealen Bindegewebes. Von Dr. Gustav Simon, weil. Prof. in Heidelberg, herausg. von Dr. H. Braun. Stuttgart. Enke.
- Die Wiener Klinik für Syphilis. Ein Rückblick auf ihr 25jähriges Bestehen, von Dr. K. Sigmund Ritt. v. Ilanor. Wien, Braumüller.
- Physiologie der Seele. Von Dr. Karl Spamer. Stuttgart, Enke.
- Neue Untersuchungen über den Bau des kleinen Gehirns des Menschen. Von Dr. B. Stilling. Mit Atlas. I.—IV. Lieferung. Cassel, Fischer.
- Die Anwendung der Elektrizität in der Prakt. Medizin. Von Dr. B. A. Erdmann in Dresden. IV. Aufl. Leipzig, Barth.

#### RECENT FRENCH BOOKS.

*Published by H. Laverreys.*

- Contribution à l'étude des hématoécèles péri-utérines et notamment de l'hématocèle par néo-membranes pelviques. De la pachy-péritonice hémorrhagique, par Jules Besnier. Paris, 1877, in-8 de 104 pages. 2 fr.
- Sur certaines malformations de l'utérus comme cause de présentation du tronc et de l'insertion vicieuse du placenta, par M. Pôlaillon.

*Published by G. Masson.*

- Le vin dans la Sologne considéré comme prophylactique puissant des fièvres telluriques. Lettres médicales, par E. Burdel. Paris, 1877. Grand in-8 de 40 pages. 1 fr. 50.
- Considérations nouvelles sur l'anesthésie obstétricale, par C. James Campbell. Paris, 1877, 1re partie, 1 vol. in-8 de 224 pages. 4 fr.
- Compression et immobilisation méthodiques par l'air ou par l'eau, pansement des plaies avec occlusion hermétique, par De Lyon Chassagny. Paris, 1877. Grand in-8 de 40 pages. 1 fr. 50.

*Published by V.-Adrien Delahaye et Cie.*

- Etude clinique sur l'ostéosarcome des membres, par le docteur Poinot. In-8. 2 fr.

Des causes de la mortalité comparée de la première enfance dans les principaux climats de l'Europe, par le docteur Kuborn. In-8. 4 fr. 50.  
 Leçons sur le diagnostic des maladies des yeux, par le docteur Landolt, recueillies par le docteur Charpentier. 1 vol., in-8, avec 27 figures dans le texte. 5 fr.  
 Leçons cliniques sur les teignes, faites à l'hôpital Saint-Louis, par le docteur Lailler, recueillies et publiées par le docteur Landouzy. 1 vol. in-8, avec 4 planches. 3 fr.  
 Leçons sur les maladies inflammatoires des membranes internes de l'œil, comprenant l'iritis, les choroidites et le glaucome, professées par M. Panas, chirurgien de l'hôpital de Lariboisière, rédigées et publiées par E. Kirmisson, aide d'anatomie à la Faculté, revues par le professeur. 1 vol. in-8, avec 11 figures dans le texte. 5 fr.  
 Du développement et des tumeurs de l'ovaire, en particulier des kystes dermoïdes, par le docteur Paul Cousin. 3 fr. 50.  
 Recherches sur la trachéotomie, par le docteur Jules-Henri Moreau, ancien interne de l'hôpital Saint-André de Bordeaux. 3 fr.

### PARIS GRADUATION THESES, 1877.

Passerat. Contribution à l'étude de la cautérisation ignée de la cornée.  
 Rabasté. Essai sur le diagnostic du cancer du poulmon.  
 Perrin. Interprétation neurologique de la réapparition des symptômes de la fièvre typhoïde pendant la convalescence de cette maladie.  
 Fauconnier. Contribution à l'étude de l'urétrite chronique simple chez l'homme, considérée surtout au point de vue anatomo-pathologique.  
 Lubrez. Essai sur l'étiologie de la dysentérie et en particulier sur la non-contagion.  
 Bourotte. Observations sur l'anthrax de la face, son pronostic et son traitement.  
 Woimant. Contribution à l'étude des abcès mastoïdiens.  
 Sabatier. Des rapports du saturnisme avec les affections chirurgicales.  
 Delleste. Des luxations du fémur au point de vue des accouchements.  
 Faurot. Essai sur les ruptures traumatiques de l'intestin sans lésions des parois abdominales.  
 Thuillier. Quelques considérations sur la taille, la circonférence thoracique, et le poids du corps chez les Français de vingt, vingt et un ans, au point de vue des conseils de révision.  
 Séjournet. Etude des modifications de la sensibilité thermique dans les ulcères variqueux.  
 Trillest. D'un nouveau procédé de cathétérisme œsophagien.  
 Serrigny. Contribution à l'étude des complications de l'iritis syphilitique.  
 Mourey. Etude sur la trépanation.  
 Artu. De l'ulcération des veines.  
 Mellié. Recherches sur le mode d'action du pansement ouaté.  
 Babillot. Recherches anatomo-microscopiques sur la muqueuse olfactive.  
 Babillot. Variations de la graisse dans le foie dans quelques états pathologiques.  
 Chambard. De la tarsalgie des adolescents, considérée dans ses symptômes, sa nature et son traitement.  
 Vignaux. De l'énucléation dans le traitement de l'ophthalmie sympathique.  
 Ledonné-Girardier. Considérations sur les principaux tenifuges, sur l'écorce de racine de grenadier particulièrement, et sur leur mode d'administration.  
 Bazot. Quelques considérations sur la dyspepsie essentielle chez les fumeurs.  
 D'Arsonval. Recherches théoriques et expérimentales sur le rôle de l'élasticité du poulmon dans les phénomènes de la circulation.  
 Racine. Des varices des membres inférieurs et de leur coïncidence fréquente avec les dilatations veineuses du système de la veine-porte.  
 Troquart. Contribution à l'étude de l'action physiologique du chloral sur la circulation et la respiration.  
 Waquet. Du traitement des anévrysmes des membres au moyen de l'appareil élastique d'Esmarch.  
 Gutierrez. De la luxation des tendons des muscles péroniers latéraux.

### RECENT ITALIAN BOOKS.

Brigidi, Dott. Vincenzo, e Tafani, Dott. Alessandro. Notizie preventive sullo sviluppo del sangue e dei vasi. Studi e considerazioni. Pisa, 1877.  
 Cianciosi, Prof. Angelo. Del valore dei principali metodi impiegati nella cura degli aneurismi. Studio storico clinico. (Dal *Bullettino delle scienze mediche*, sere v, vol. 24). Bologna, 1877.  
 Del Monte, Prof. Michele. Sul Glaucoma; comunicazione preventiva letta al Congresso della associazione oculistica italiana nella tornata del 28 settembre, 1877, in Firenze.  
 Feroci, Dott. A. Considerazioni critiche intorno all' avvelenamento col rame ed i suoi sali, scritte in servizio del Foro. Pisa, Mariotti, 1877.  
 Gasca, Dott. Giulio Cesare. Studio sulla importanza della luce nella eziologia della clorosi. Torino, 1877.  
 Omboni, Dott. Vincenzo. Aneurisma dell' aorta toracica per cinque volte trattato felicemente col metodo Ciniselli. (Dal *Raccogliatore Medico*). Forlì, 1877.  
 Tasciotti, Dott. Federico. Sulla tifoide di Supino. Note cliniche-statistiche. Ferentino, 1877.

### MISCELLANY.

DR. WILLIAM STOKES, the eminent Regius Professor of Physic in the University of Dublin, died on the 7th instant, at the age of 73.

PROFESSOR ESMARCH, of Kiel, has been made a Commander of the Austrian Order of Francis Joseph.

DR. MARTYN PAINE.—Professor Martyn Paine, of New York, died November 10th, aged eighty-three, after a compound fracture of the elbow-joint. He was born in 1794, educated at Harvard University, and took the degree of M.D. from the Medical Department of that institution in 1816. Thence he went to Montreal, and engaged in practice till 1822, when he removed to New York, in which city he lived during the remainder of his life. In 1841, Dr. Paine, with Drs. C. A. Lee, A. C. Post, G. S. Bedford, and A. S. Doane, established the Medical College in connection with the University of the city of New York. For many years following he filled the chair of the Institutes of Medicine and Materia Medica, and subsequently that of Therapeutics and Materia Medica. The greatest service done by Martyn Paine to science and humanity was his procuring the repeal of the law which made it a penal offence to dissect a human body. He succeeded in convincing the representatives of the people, assembled in the Legislature of this State, that such a law was irrational, and a perverse interference with the advance of knowledge of the healing art, and despite the tremendous opposition that was raised against him, a law was enacted by which any regularly incorporated medical college in the state of New York was entitled to its share of legitimate material for the better study of anatomy, physiology, and surgery. Dr. Paine was the author of numerous works. He withdrew from the medical faculty of the university about twenty years ago, but was soon after elected Professor Emeritus of Materia Medica and Therapeutics, which position he held till the time of his death. He was always a strict dietician, and for the last twenty years had subsisted on vegetable food exclusively. In his practice he went upon the plan of depleting rather than "building up" his patients as a preliminary to effecting a cure. His convictions were strong, and he was a powerful talker as well as a vigorous thinker and writer.

M. RASPAIL.—M. Raspail, the well-known French democrat, whose death is just announced, was also a distinguished chemist, and between 1824 and 1830 produced some remarkable works on botany, zoology, palæontology, chemistry, and anatomy, which attracted a good deal of attention, not only throughout France, but also abroad; and one Italian *savant*, in dedicating his works to him, went so far as to call him "the creator of organic chemistry". In 1840, he appeared in the trial of the celebrated Lafarge poisoning case, and, at the request of the counsel for the defence, he controlled the analysis of M. Orfila, who, with the aid of Marsh's apparatus, had discovered arsenic in the body of the deceased. M. Raspail contended that this fact proved nothing, as arsenic could be found in all bodies, and he even undertook to find arsenic in the wood of the very chair on which the judge was sitting. This affirmation created immense sensation in the scientific world, and for a long time was warmly discussed both at home and abroad. About the same time he startled the public with another assertion, which was destined to lead to the making of his fortune. His studies had convinced him that most maladies to which human nature is subject arose from the invasion of parasites internally or externally, and he selected camphor as the remedy—in fact, he subsequently supplied that substance as a universal panacea for every kind of disease or ailment. At first sold in the form of cigarettes, the new medicament became the rage of the day; and the inventor ultimately developed his camphor system in a *Manuel de la Santé*, a kind of medical encyclopædia for the use of families, which is still published every year, and extensively patronised by the poorer classes. He also opened a chemist's shop, and this,



together with his camphor works, soon brought him in a large fortune. He was prosecuted for practising medicine without a diploma, and had to confine himself to private and gratuitous consultations. The Revolution of 1848 once more brought M. Raspail back to the political arena. At the very beginning of the insurrection, on the 24th February, he was the first to take possession of the Hotel de Ville, and proclaimed the Republic even before the arrival of the members of the Provisional Government. He was afterwards condemned to five years' imprisonment for political offences, and on leaving prison in 1854, he retired to Belgium, where he resumed his scientific studies. In 1869 he was returned to the Chamber of Deputies as the representative of the Socialist and Democratic party. Since the war M. Raspail has been almost forgotten, and his advanced age precluded him from taking any active part in politics.

DR. PAUL F. EVE.—Professor Paul Fitzsimmons Eve, a distinguished American surgeon, died suddenly, while in attendance upon a patient, November 3rd, aged seventy-one years. He was born June 26, 1806, near Augusta, Georgia; graduated at the University of Georgia in 1826; as M.D. at the University of Pennsylvania in 1828, and was a student several years in Europe. He served as a volunteer surgeon in the Polish revolution of 1831, and received the Golden Cross of Honour of Poland that year. He became Professor of Surgery in the Medical College of Georgia in 1832, in the Louisville University in 1849, in the Nashville University in 1850, and in the Missouri Medical College, St. Louis, in 1868. In 1870, he accepted the chair of Operative and Clinical Surgery in the University of Nashville, which position he held at the time of his death. As a representative man for the South he was, in 1857, chosen President of the American Medical Association. During the rebellion he served as surgeon in the Confederate Army, and for the greater part of his professional career was identified, directly or indirectly, with medical journalism in his section of country. A hard worker in his profession, his strictly methodical and temperate habits enabled him to carry his burden of duties up to the very threshold of his death. Dr. Eve, as a surgeon, will be best remembered in connection with his remarkable successes as a lithotomist. Of ninety-two bilateral operations for stone, eight only terminated fatally. His last notable contribution to medical literature was his address on Surgery at the International Medical Congress in 1876. Dr. Eve was twice married. He leaves three sons and two daughters.

LADY DOCTORS.—Professor Tarkanhoff, of the St. Petersburg Medical Academy, having assisted at the examinations in physiology and anatomy of the thirty-six ladies who have finished their five years' course at the High School of Medicine at St. Petersburg, publishes a report on those examinations. The answers of the ladies, he says, were definite, clear, and often vivid. Deep and very accurate knowledge was shown in anatomy and histology, the examinations having been made according to the extensive programmes existing in ordinary universities. On the average the answers were quite as good as those of male students; but the answers of three or four ladies, by their completeness and brilliancy, produced a deep impression on the examiners, and greatly exceeded all the professor has ever witnessed either as a student or professor.

NEAR-SIGHTEDNESS.—Dr. Loring has discussed before the New York County Medical Society the question, "Is the human eye gradually changing its form under the influence of modern civilization?" It has sometimes been stated that ocular weakness and disease in various forms appear to have been rapidly increasing in recent times. Dr. Loring confirms this opinion, so far, at least, as short-sightedness is concerned. Constant study has, he says, a tendency to engender this derangement of the eye, and it is often perpetuated by heredity. Near-sightedness, he says, is a disease of childhood, and rarely develops itself after

the 15th or 18th year. Hence mechanics engaged in very minute work present fewer cases than those whose straining of their eyes has commenced at an earlier period of life than that at which mechanical pursuits are adopted. Dr. Loring has been prosecuting extensive inquiries on the subject. He examined the eyes of 2,265 scholars in the New York public schools, and he found that the proportion of those in a healthy condition were 87 per cent. among children under seven years, while between that age and 21 the proportion of normal eyes was but 61. In the young he found the cases of near-sightedness were 3.5 per cent. of those examined, and 26 per cent. in the elders, the same class presenting in St. Petersburg 13.6 per cent. and 43.3 per cent. respectively. In Königsberg, Germany, he found considerably more than half the population were short-sighted. These figures show, he thinks, that near-sightedness increases directly with the age to which schooling is extended. It is more commonly met with, he affirms, among the older eastern cities of America than the new ones of the west. Among the most prominent causes of the disease are, in his opinion, a sedentary life, poor food, bad ventilation, and general disregard of hygienic requirements—all conducing to a laxity of tissue of which near-sightedness is an indication.

CRANIOMETRY.—A scientific inquiry lately made by Dr. Delaunay among the hatters of Paris offers some curious results. Accepting it as true that the capacity of the cranium and development of the brain are proportional to the external volume of the head, also that the intelligence is proportional to the volume and weight of the brain, he shows, *inter alia*, that certain families develop like individuals—that is, they have a period of growth, then a stationary period, then a period of decrease, next to extinction. In families in the first period the head enlarges from generation to generation. The citizens who wrought the revolution of 1789 had bigger heads than their fathers. On the other hand, in families that are nearing extinction the head grows smaller. The sons of the present ruling families in France have such small heads—according to the author—that they require hats specially made for them. Among certain families newly risen from the common people the head increases from generation to generation. The wide-brimmed hats—bolvares—worn by the Republicans from 1830 to 1848 are very capacious. The quarter in which are the largest heads in Paris is that of the schools. The hatters of the Faubourg St. Germain say they only fit fine heads. The Polytechnicians have larger heads than the St. Cyrians, and the students of the normal schools larger than those of St. Sulpice. The members of the clergy present a peculiar feature in these statistics. "In general," says M. Delaunay, "men from thirty to forty years of age have larger heads than those from twenty to thirty. Not so with ecclesiastics, for their heads cease to grow at about twenty-five. The curés, bishops, archbishops, &c., have no larger heads than the students of the large seminaries.

THE INSTINCT OF INSECTS.—Professor J. Plateau, of Ghent, has reprinted (from the *Proceedings* of the French Association for the Advancement of Science, 1876) a paper on the question, Is the instinct of insects deceived by artificial flowers? As far as the series of experiments performed by him—rather few in number, but apparently carried out with great care—can be relied on, although insects may be attracted from a distance by the bright colours of artificial flowers, they are never tempted by the resemblance to alight on them in the hope of obtaining food from them. He concludes, therefore, that insects make use of some other organ than that of sight in the selection of the flowers which they visit.

DESTRUCTION OF LIFE IN INDIA.—Last year 48,000 cattle were destroyed by wild animals and venomous snakes in the Indian Empire; and 22,357 wild animals and 270,185 poisonous snakes were killed; 120,015 rupees were expended in rewards. In the current year 19,273 persons and 54,830 cattle have been killed, and 124,574 rupees expended in rewards.

# The London Medical Record.

## ON FOREIGN BODIES IN THE ŒSOPHAGUS, AND ON ŒSOPHAGOTOMY.

By B. VON LANGENBECK,

Professor in the University of Berlin.\*

BEFORE relating the history of two cases of œsophagotomy, I will first make some remarks on foreign bodies in the food-passage, partly in order to lay before you my experience in this department of surgery, partly for the purpose of directing your attention to some errors in the practice which has hitherto been very generally followed in the treatment of these cases.

You all know that there are three different parts of the food-passage in which foreign bodies generally stick, viz., in the pharynx itself; at the point of transition from the pharynx to the œsophagus opposite the cricoid cartilage; and close above the cardia. Pointed and sharp-edged bodies, such as pieces of bone, fish-bones, pins, etc., may remain sticking at any point in this part of the alimentary canal at which they may be caught in the folds of the mucous membrane, or may penetrate the wall.

Large foreign bodies remaining in the pharynx may press down the epiglottis on the rima glottidis and, if not immediately removed, may cause death by suffocation. I have three times removed foreign bodies from the œsophagus in these circumstances.

A boy, aged 14, one of my relations, was amusing his little brother in my presence by throwing up a Borsdorf apple and catching it in his mouth. This was done successfully many times, when the boy suddenly fell to the ground, with his mouth wide open and his face blue. Fortunately, by inserting the index finger beside the apple it was removed; and the breathing at once became free.

The second case occurred in a very robust gentleman from Mecklenburg, who came to consult me on account of an inguinal hernia. In order to ascertain whether the hernia was reducible, I desired him to lie on the sofa. While he was in the act of doing this, he suddenly fell to the ground, apparently lifeless, and with his face blue. Without knowing what the cause of the asphyxia could be, I introduced my index finger into the fauces and removed an entire set of false teeth, which completely filled the passage. Several—to me very anxious—seconds passed before the breathing and pulse returned. A similar case has been recorded by Dieffenbach.

A third case occurred in a lady on whom I was about to perform amputation of the breast. While the chloroform was being given, her breathing suddenly became stertorous and difficult, and her face of a dark blue colour. The finger, introduced into the mouth to draw the tongue forward, met with a set of false teeth belonging to the upper jaw. It was at once removed.

In the course of this paper I shall have to mention several more cases of swallowing artificial teeth, in which the patients did not escape so easily, and

we may well beg dentists to devise some precautionary measures to obviate similar mishaps. It is, however, the surgeon's duty, before he administers chloroform to old persons, to ascertain whether they wear artificial teeth, and, if so, to take them out at once.

For the removal of large foreign bodies, extraction with the finger should be tried before anything else. Tracheotomy, which has been recommended in such cases, will probably always come too late. When the finger fails in consequence of the foreign body being fixed too firmly, instruments of the nature of the forceps or lever are to be used. Even in the case of small and pointed foreign bodies, such as pins, fish-bones, or pieces of bone, which frequently stick in the pharynx, and especially in the pouches formed by the glosso-epiglottic ligaments, the introduction of the finger should never be omitted, whether to remove it at once from the mouth or to ascertain with accuracy its situation, so as to remove it by the forceps.

When foreign bodies of some size, such as morsels of meat, hard pudding, potatoes, etc., pass beyond the limits of the pharynx, they not unfrequently remain sticking in the œsophagus, at the level of the cricoid cartilage, and, by pressing on the larynx or trachea, may produce very considerable difficulty of breathing. Their situation is sometimes easily detected by a rounded projection on the left side of the neck; but their removal is very troublesome, because the œsophagus is spasmodically contracted above and below the foreign body. Too pressing a caution cannot be uttered against pushing it down violently, since injury of the œsophagus cannot with certainty be avoided.

In December 1847, a peasant, aged 56, came to me in Kiel, in order to be freed from a piece of meat which was sticking in his œsophagus. While at dinner thirty hours before, he had swallowed a large piece of gristly beef. He immediately became unable to swallow a drop of liquid, and was in the greatest anxiety lest he should be choked. Inspiration was difficult, and was accompanied by an evident stridor; expiration was less impeded. At the left side of the neck, opposite the cricoid cartilage, there was a swelling as large as a pigeon's egg, somewhat resistant to the touch. Repeated attempts to remove the foreign body by means of a slightly curved strong œsophageal forceps were unsuccessful; the foreign body remained immovable, and the forceps only tore off and brought away fibres of meat. I thought that it would be necessary to perform œsophagotomy, since, during the attempts at removal, the difficulty of breathing was much increased. Having fixed the swelling projecting in the neck with the finger, I raised it from the larynx (immediately on which the breathing became more free), and compressed it for several minutes between my fingers. The foreign body did not move from the spot, but, in consequence of the manipulation above referred to, it had assumed a more oblong shape. The œsophageal forceps was again applied, and, after some effort, the piece of meat was removed. The difficulty of respiration was immediately overcome.

In like manner, I succeeded in pushing down into the stomach a rather large lump of meat of considerable firmness, which had been swallowed by a man aged 45, while hastily eating some broth. The mass had stuck for twenty-four hours in the œsophagus, opposite the cricoid cartilage, and formed a round swelling at the left side of the neck. The patient came to me in the greatest excitement, as

\* Read before the Medical Society of Berlin.—*Berliner Klinische Wochenschrift*, December 17 and 24, 1877.



the foreign body impeded respiration, and neither solid nor liquid food could be swallowed. Violent retching, produced by introducing the finger at various times into the larynx, had been without result. The attempt to seize the foreign body with the forceps, or to push it down, failed. The lump had formed a kind of diverticulum in the wall of the œsophagus on the left side, and could not be reached with the forceps. I seized the projection in the neck with my fingers, and squeezed it with such force that the foreign body was crushed and enabled to pass into the stomach.

In a similar manner, by fixing it from without by his fingers, Dupuytren crushed a potato which had stuck in the œsophagus, and resisted all attempts at extraction or pushing down into the stomach (*Leçons Orales de Clinique Chirurgicales*, tome iii, Paris, 1839).

If the foreign body do not cause a projection in the neck, we have the task of finding its situation. In regard to this, it deserves to be mentioned that the accounts given by the patients themselves may be very deceptive. In many cases they cannot tell the situation of the foreign body at all, and sometimes they refer to a part of the œsophagus which is far distant from the real situation. The lady in whom a set of false teeth stuck opposite the cricoid cartilage referred to the cardiac region, and a man who had a piece of bone in the thoracic portion of the œsophagus referred to the cervical portion as the seat of the foreign body.

It may thus be necessary to perform catheterism of the œsophagus in order to ascertain the situation of the foreign body. I must take this opportunity of directing your attention to a very general, I may well say traditional, practice, regarding which too much cannot be said in the way of warning. Most medical men, when a patient comes to them with a foreign body in the œsophagus, introduce the probang still recommended in most surgical works, the well-known piece of whalebone with a sponge at the end, in order to find the situation of the foreign body, and, just as luck will, to draw it out or push it down into the stomach. Anything more irrational could scarcely be imagined; and, considering the comparative rarity of the occurrence of foreign bodies in the œsophagus, scarcely any surgical instrument has done so much injury as the probang. With this instrument we can *feel* nothing; it neither enables us to discover the situation nor the consistence of the foreign body. In the most fortunate case the foreign body is pushed on into the stomach, or is withdrawn; but very often the sponge, fitting closely the inner surface of the œsophagus, pushes the foreign body into a deeper part of the tube, from which it cannot be removed, or, as I have seen in two cases, drives it through the wall of the œsophagus into the posterior mediastinum.

If soft bodies stick in the œsophagus, the introduction of which into the stomach is unimportant, the probang may still be used; but in all cases where the nature and the situation of the foreign body are unknown, or where extraction appears to be called for, catheterism of the œsophagus is to be preferred.

For this purpose I use a piece of whalebone, at the lower end of which a smooth polished iron knob is fastened. Well oiled, this knob glides down without difficulty, as if by its own weight, through the œsophagus; it can be easily pulled up and down, and detects with certainty hard foreign bodies, such as coin, needles, or pieces of bone.

If the object be simply to push down into the stomach a foreign body of which the harmlessness is known from the patient's statement, I use gum-elastic œsophageal bougies. These act like the probang in thrusting down the foreign body, but glide much more easily down the œsophagus, and enable injury to be more certainly avoided.

Foreign bodies, which may become dangerous by injury of the œsophagus or by their retention in the intestinal canal, such as pieces of bone, or of glass, coin, needles, and fish-bones, I endeavour in all cases to remove. I regard extraction of these foreign bodies as far more certain and less dangerous than pushing them down into the stomach, and I can assure you that in a large number of these operations I have not once had an unsuccessful case. The instrument which I exclusively use, and to which alone I ascribe the fortunate results, is Von Gräfe's coin-catcher. It is introduced without difficulty or injury into the œsophagus beyond the foreign body, and, when withdrawn, catches coins, flat pieces of bone, needles, and fish-bones with a certainty which leaves nothing to be desired.

Before introducing the instrument, it is advisable to inject some oil into the œsophagus. The lower end of the instrument is carefully guided by the left forefinger over the root of the tongue and the epiglottis to the posterior wall of the pharynx. In withdrawing it, we must proceed very carefully; if it meet with resistance, we must move it gently up and down, so as to loosen the foreign body, which perhaps may be fixed in the mucous membrane. When the instrument with the foreign body has reached the level of the cricoid cartilage, the projection backwards of this part sometimes hinders further extraction. This impediment is overcome by pushing the end of the sound, which is already visible, against the posterior wall of the pharynx. When the coin-catcher with the foreign body is visible in the isthmus faucium, the operator should, especially in the cases of restless children, again use his left forefinger to seize and remove the foreign body, which readily falls out in consequence of the horizontal position of the foreign body.

A firmly seizing œsophagus-forceps and this coin-catcher are all the instruments which I use in the removal of foreign bodies from the œsophagus. I must, however, not omit to mention a misfortune which may attend the use of the coin-catcher; namely, that the foreign body may become so tightly fixed in the instrument that, if the former should stick immovably in the œsophagus, the instrument cannot be detached from it. An accident of this kind happened to Herr von Adelman in the endeavour to remove from an Estonian peasant, by means of the coin-catcher, a piece of bone which was sticking at the level of the cricoid cartilage. After the foreign body had been seized by the coin-catcher, it was found that the piece of bone was so firmly fixed that it could not be moved. The attempt to detach the instrument also failed; it had to be left two days in the œsophagus, and was only removed on the third day by passing a wide gum-elastic tube over the handle of the coin-catcher, so as to push aside the ring from the bone. If this had not succeeded, œsophagotomy would have afforded certain aid.

I found myself in a worse situation in the following case.

Fraulein von H., aged 17, on January 23, 1852, at 10 a.m., swallowed a lady's shawl-pin with a glass

head, about an inch and a half long. While about to go out, and holding the pin with the head between her teeth, she answered a question which was asked. The pin slipped into the mouth, and, as she asserted, remained sticking near the cricoid cartilage. The medical man who was immediately sent for introduced Petit's sponge-probang, but failed in removing the pin. At noon I was called to the patient, who complained of some pain in the lower part of the œsophagus. On careful introduction of my œsophageal sound with an iron head, I felt the pin not far from the cardia, at the lower end of the œsophagus, lying, it seemed to me, obliquely. The coin-catcher was passed down into the stomach, and, on being withdrawn, at once seized the foreign body; but this appeared to have penetrated the œsophagus so deeply that, in spite of repeated attempts, I could not draw it upwards. I now wished to desist from attempts at extraction and to detach the instrument from the pin; but this was impossible. It was only after half-an-hour that I at last succeeded in removing the coin-catcher, on which the pin slipped into the stomach. In the evening the fæces contained much blood, showing that the pin must have passed deeply into the œsophageal wall. During the first month after the accident the patient often complained of pain in the region of the stomach, especially after eating and after sudden movements of the body. In other respects she was, and still remains, perfectly well. The pin has not yet come to light.

On consulting statistics, we must believe that foreign bodies in the œsophagus are very dangerous. In 314 cases collected by Herr von Adelmann (*Prager Vierteljahrsschrift für die Practische Heilkunde*, Band iv, 1867), we find 109 deaths. It is self-evident, however, that the conditions are far less unfavourable, as the large number of cases in which foreign bodies are extracted without difficulty or injury, or are pushed down into the stomach, remain unpublished. In my clinical practice, extending over thirty-four years, I have extracted a large number of foreign bodies from the œsophagus without a single mishap. Coins sticking in the œsophagus have always been withdrawn; of pieces of bone, some have escaped into the stomach as soon as they were moved or seized by the coin-catcher; but most of the flat or pointed pieces of bone have been extracted. Professor Busch has related in the proceedings of the second Congress of German Surgeons (1873) three cases of perforation of the œsophagus by pieces of bone, of which two were fatal, and one cured by thoracentesis; in two of these cases the sponge-probang had been previously used, so that the piece of bone could not be found.

It is above all things important that the foreign bodies be removed as soon as possible, and that the surgeon act with decision.

If extraction of the foreign body fail, and its consistence do not allow it to be pushed down into the stomach, and if it be situated in the cervical position of the œsophagus, the operation of œsophagotomy must be performed.

A. HENRY, M.D.

(To be continued.)

## CHARCOT AND THAON ON TUBERCLE.

In the report of the meeting of the Société Anatomique published in the *Progrès Médical* for December 15th, 1877, M. Charcot made the following communication on some cases of caseous pneumonia.

In the three cases in question there existed pseudo-lobar pneumonia which, in reality lobular in origin, had invaded the whole lobe of a lung. Clinically, the disease had developed with great rapidity, and with the phenomena of lobar pneumonia. Death supervened in one case on the fourth day. These were therefore cases of a lesion which has been designated caseous pneumonia, and which, according to Virchow, originates in a bronchopneumonia developed apart from tubercle. Histological examination showed him that there was reason to reconsider the opinion emitted by Virchow and Reinhardt, and accepted too easily, that indeed in these cases there actually is a lesion of tubercular nature, and that we must accept the doctrine of Laennec modified slightly to suit the progress of histology. This opinion is not new in France. MM. Thaon, Grancher, and Renault have sustained it; later, in England, Wilson Fox has confirmed it. The nodules visible to the naked eye in sections of the pulmonary tissue are constituted by an aggregation of milary tubercles. It is to be remembered that tubercle, when isolated, presents at its centre a giant-cell surrounded by epithelioid cells and numerous nuclei. In a section of a pulmonary lobule one sees two orifices, one of the artery the other of the bronchus. Around the latter the lesions are grouped in the form of an irregular mass divided into two zones; one, central, yellow, and caseous, is distinctly separate from the other, which is exterior. This, which has been well observed by Grancher, is formed of a series of tubercular granulations, each containing a giant-cell and nuclei. These giant-cells are ordinarily arranged in a single row, but may form several. Around this peripheral zone the pulmonary alveoli appear healthy, or at least have no lesions tubercular in character. The whole of these alterations constitute a tubercular mass with central caseation, for here as in the tongue they are always the central tubercles which first soften. There was no pneumonia in a part examined by M. Charcot. If there were fibrinous deposits in the pulmonary parenchyma, that was an accessory phenomenon, for the masses, caseating at their centre, were always surrounded by easily recognisable tubercular zones. It mattered little if pneumonic exudation were found in the lung-parenchyma; caseation was never produced in these places. This always appeared at the centre of a distinct agglomeration of tubercles. Whether or not these were surrounded by various lesions, these latter were only secondary. Caseous pneumonia, the supposed result of caseation of a pulmonic exudation independent of tubercle, did not exist in the specimens examined: and as to the existence of caseous pneumonia, M. Charcot thinks there is need to support it by new facts.

M. Thaon, of Nice, writes in the *Progrès Médical* for January 12th, 1878, as follows. After many ups and downs, the dualistic theory of tubercle appears to us to be finally abandoned. The theory of Laennec has been preserved by the resistance of French clinicians; it has been rejuvenated by the labours of our histologists, Ranvier, Cornil, Grancher, Thaon, Malassez; it has become once more classical, thanks to the learned lectures of M. Charcot. Taking for point of departure this solid base, we can approach the solution of certain problems which had been until now wisely held in reserve. Among the complex questions which tuberculosis presents there is none more difficult, more controverted, than its relations to scrofula. Lugol, Graves, and Lebert maintained that phthisis was nothing but scrofula of



the lung. Morton, Milcent, and Bazin have described a scrofulous phthisis which possesses special characteristics independent of ordinary phthisis. Pidoux contents himself with thinking that scrofula furnishes a larger contingent of phthisical subjects than other maladies. Virchow made caseous pneumonia the synonym of scrofulous pneumonia. What are we to think in this see-saw of opinions, and what part shall we take amid so many theories? Up to the present time it has been by studying the anatomical characters of scrofulosis of the lymphatic glands, and by comparing them with the pulmonary lesions, that authors have concluded for or against the identity of the two affections. By the same method we shall seek to elucidate the question. But this time we have very precise notions about tubercle and the pneumonia called caseous; we can, thanks to better knowledge of the normal structure of lymphatic glands, guide ourselves better in the pathologico-anatomical study of these complicated organs. There are glands which everybody is agreed are tubercular; these are those which are sometimes met with in phthisical subjects near the great bronchi and their divisions; they present granulations of small round nodules, distinguished from the rest of the parenchyma by their bluish grey or yellow colour, and their exact circumscription. Authors consider these to be tubercles of the glands, but in order to avoid risk of confusion they take care to attest the rarity of their existence. Barthez and Rilliet found this lesion in only 16 in 249 cases of phthisis affected by glandular degeneration. We may add that in our numerous necropsies we have not often met with these granulations with their macroscopical characters well marked. If, then, it is admitted that these glands are in reality affected by tubercle, let us inquire more closely into the details of their structure, and demand from histology some data which will permit us to recognise the lesions when masked by complex conditions, and hidden from superficial observation. A section of a gland examined with low powers shows that the elementary granulations are multiplied considerably, and fill the field of the microscope. The tubercles which were visible to the naked eye appear, when magnified, as aggregations of elementary tubercles; these are conglomerate tubercles. Besides these there are a crowd of little solitary granulations, which, under feeble magnifying powers, appear as slightly opaque foci, surrounded by clear tissue. After hardening in picric acid and staining by picro-carminate of ammonia, we obtain very fine preparations, of which several parts are vividly stained. These are the healthy parts of the gland, the follicles and cavernous system; other parts are paler—these are the elementary granulations; finally some are not stained at all—these are the granulations already a little old. In this preparation we can observe that the granulations contain elements of very variable size; there are great cells with many nuclei, and true small embryonal cells, and all the intermediaries between these two. Whoever has seen the elementary granulations of the mesentery will notice a remarkable resemblance. These elements are grouped round a fine circular figure, very large, represented by a granular central mass, coloured yellow by the re-agent, and bordered by an elegant band of oval nucleated cells. This is the pretended giant-cell, or *Riesenzelle*. Thanks to these characters, we can already distinguish the granulation from the surrounding tissue, and from the lymphoid cells which everywhere occupy the

normal glandular tissue. Otherwise it seems that one of the first effects of the granulation is to destroy the gland-cells, for the gland-tissue is certainly less rich in these elements in the immediate neighbourhood of the tubercle. By brushing out a preparation, we can see that the reticulum of the gland at the seat of the granulations is preserved, but is thicker and granular. On certain fibres we see great cells with many nuclei, and there are others in the meshes mingled with other smaller ones; the pretended giant-cell resists the brush, the lymphatic structure becomes detached from it.

Thus the development of tubercle in the glands takes place, as in the mesentery, by the multiplication of epithelioid cells. In both regions the granulation has its state of complete development; it is constituted by a great number of embryonal cells mingled with cells of greater size; the whole grouped in the form of a little rounded figure. The *attributs de luxe*, the giant-cells, are not wanting; they are even more numerous and better defined than anywhere else. The more advanced periods of the granulations are those of fatty degeneration and fibroid transformation. These two evolutions of the granulation do not offer anything peculiar in the glands. The reticulated framework of the lymphatic tissue disappears in the caseous places. On the other hand, it hypertrophies, and becomes transformed into fibrous tissue around the foci, and forms the proper capsule of the old granulations, or granulations of Bayle.

Besides the manifestly tubercular glands just described, there exist many others whose tubercular nature is matter for doubt to many authors. They are more generally regarded as scrofulous. These more or less enlarged glands present on section nodules of grey material, varying in size from a grain of millet to a large nut. Sometimes one of these nodules occupies the whole gland. More often the same gland is strewed with islands of pale yellowish colour, and its section has a marbled appearance. It is important to know whether we shall find in these glands some of those well-defined characters which belong to tubercle of the glands, or whether we have to do here with a different process. The same sections, the same mode of preparation, show in the constitution of these grey nodules the giant-cells, the proliferation of the epithelioid tissue of the stroma, the groups of embryonal cells, in one word, all the elements of granulation without exception; but here the granulation is not isolated or grouped in little masses, but infiltrates a great part of the gland; it has affected the form it so often takes in bone, in lung, testicle, and kidney. It is still tubercle that we are looking at, but tubercle which has acquired enormous dimensions, and has thus escaped the much too exclusive definition given by Virchow. This great tubercle degenerates just as simple granulations do; it undergoes the caseous change, and is eliminated by the external surface or by the great bronchi. But it may also undergo fibroid transformation at its periphery and remain encysted. Therefore there exists no essential difference between this gland and the other previously described, so that we cannot see why we should refuse to consider it as tubercular, nor why it should be regarded as a purely scrofulous gland.

In the course of our investigations we met with a third variety of glands. These are found in very young subjects, who have never presented any signs of tubercle or of scrofula. They are very large, often as large as the head of a foetus; their usual seat is

the side of the neck. These tumours are globular, spheroidal, or somewhat flattened and irregularly quadrilateral; they are indolent, of variable consistence, and generally unequal on their surfaces; they are yielding and elastic, and pass deeply in between the muscles, but only displace parts, and do not adhere to the skin. This form is of especial interest to surgeons who have to distinguish between it and other degenerations of the glands, especially sarcoma and lymphoma. Not unfrequently an error in diagnosis, or the danger of great increase of size, has led surgeons to remove such tumours; and we have had the opportunity of examining several in the histological laboratory of the College de France. Among the numerous glands which make up such a mass some are smooth on section, greyish, uniform, and under the microscope show all degrees of interstitial inflammation; others have nearly the same naked eye characters, but under the microscope show numerous points of fibroid degeneration, of zones where the only remnant of the lymphatic tissue is the reticular mesh-work, much enlarged, and filled with large granular cells. Still other glands present islands of caseous material, true granulations with embryonal cells and giant-cells. Finally there are some which are completely caseous. Whence this great diversity of lesions? It is probably due to the slowness of the process, a slowness which leads to the predominance of fibrous tissue in the degenerated glands; but the anatomical sign, the tubercular granulation, is always there. These glandular masses, therefore, also belong to tuberculosis; they belong as well as those complex lesions found in the lungs of certain phthisical cases, and which are constituted by induration, caseous nodules, granulations of Bayle, and ordinary granulations. Pathological anatomy declares that the type of scrofulous affections, the enlarged cervical glands, without which some have denied the existence of strumous disease (see Bazin), belongs really to tubercle.

It is the same for several other affections which, at least formerly, were considered as purely strumous in their nature. It is so for strumous orchitis, which Malassez and Réclus have shown to be tubercular. It is so for the pretended scrofulous nephritis, scrofulous brain-diseases, meningitis, pleurisy, and peritonitis. Phthisis in its turn has not escaped the assimilation. What is the caseous pneumonia or scrofulous pneumonia of Virchow but a tubercular infiltration? Our exact observations, collated by M. Charcot, have demonstrated that all is tubercle in pulmonary phthisis except the irritative lesions in the neighbourhood, catarrhal and interstitial lesions. What does clinical medicine teach us on this point? It shows us clinicians distinguishing scrofulous phthisis long before pathological anatomists, and assigning to it distinct characters! Franck, Morton, Milcent, and Danjoy declare this phthisis to be recognisable by its slow progress, abundant expectoration, absence of fever and hæmoptysis, and a manifest contradiction between the very extensive local changes and such very slight constitutional disturbance. This typical scrofulous phthisis has not been accepted without dispute. MM. Hérard and Consil combat it strongly. It is curious to see, say they, that the examples and the types of this form furnished by these authors are precisely those cases of phthisis whose course has been rapid and soon fatal. Our personal experience in a locality where sufferers with chest-diseases from all countries come for treatment (Nice), shows us that there is a very great tenacity of life in certain patients of

Slavonic origin, and who present all the attributes of scrofula, but that is a long way from admitting a distinct clinical form characterised by the name of scrofulous phthisis; phthisis is one, whatever be the soil in which it is planted, whatever be its course.

In this way a crowd of lesions asserted to be scrofulous may be absorbed into tuberculosis, but in doing so have we for our sole aim the despoiling of scrofula to enrich tubercle? It would be an ungrateful task, and one which would be moving in a circle, to augment or diminish the domain of one or other of these two diseases according to the ideas of the moment. It appears to us that there is room for a third opinion; let us see whether the declaration of the identity of the two diseases, the fusion of the two diatheses in one is not probable; whether this hypothesis does not permit the grouping of all the facts, and the connecting of one with the other. Since the lesions of the strumous glands are identical with those of pulmonary tuberculosis, and that strumous glands are the most undeniable manifestation of scrofula, it follows that we cannot avoid admitting the scrofulous nature of pulmonary phthisis. From this point of view it is not caseous pneumonia which is scrofulous, as Virchow said, but phthisis as a whole is absorbed into scrofulosis. This opinion was maintained by Lugol, but immediately met with a crowd of contradictors. Lugol maintained that scrofula and tubercle reproduced mutually by heredity, but we dared not confound in a single disease tubercle and scrofula; we dared not touch tubercle or the tubercular diathesis as created by the genius of Laennec. The clinicians objected that, if there were many phthisical patients who were scrofulous, there were also many who were not; as if a general constitutional disease could not be incomplete, as if its localisations must always be regulated on a pre-established plan, and ought always to appear in the same order of succession! We are not unaware that scrofula shows itself at first in the form of benign scrofulides of the skin and mucous membranes, that later it gives rise to graver manifestations, such as ulcerative eruptions of the skin, and that finally it invades the viscera. But how many exceptions, how many deviations, are there from this typical course? One person has a rodent lupus of the face as first manifestation of scrofula; another has a glandular tumour of the neck; and a third an infiltration of the testicle or the lungs. Scrofula may be incomplete; it may show itself in graver lesions either of the skin or of the viscera; its localisations may be determined by insignificant occasioning causes. Thus an impetigo supervenes after piercing the ear-lobule; a scrofulous gland comes in a soldier's neck from the rubbing of his jacket-collar; infiltration of the lungs occurs in the workman who inhales dust. This predisposition to a definite localisation may be transmitted hereditarily, so that a person suffering from pulmonary phthisis, that is to say, suffering from scrofula of the lung, will have children who in their turn will succumb to the same malady. Cancer offers analogous cases of its appearance for several generations in the organ, the stomach, or the mamma. When we put forward a new theory, we scarcely know how to defend it against the numerous objections raised. One of these has been considered fatal. Physicians who have studied the geographical distribution of disease tell us that scrofula and tubercle do not invade the same countries, that scrofula is present at altitudes where phthisis has disappeared. There is much scrofula in the Harz, in Sardinia, in Bengal, and other



countries where phthisis is relatively rare. All this proves that in those countries the bad hygienic conditions in which the natives live as regards food and houses, suffice to cause scrofula, but that the something is wanting which provokes its localisation in the lungs in the form of phthisis. No other conclusion can be drawn from the facts. Others tell us that by confounding scrofula and tubercle we ignore the results of experiments which have shown the existence of a tubercular virus inoculable on many kinds of animals, and not being derivable from simple scrofula. We answer by protesting our admiration for the beautiful experiments of Villemin and Chauveau, but we declare that they do not prove that tuberculosis in man is virulent or transmissible by contagion. In conclusion, after having in our previous works paid our modest tribute to the re-edification of the theory of the unity of tubercle, we add to-day, that the theory of the unity of scrofula and tubercle has nothing in it improbable, and that we find in pathological anatomy more than one argument in its favour.

ROBERT SAUNDBY, M.D.

#### CHARCOT AND GALEZOWSKI ON HYSTERICAL AFFECTIONS OF VISION.

M. CHARCOT in a recent lecture (*Progrès Médical*, January 19) again refers to this subject, and directs attention to certain new facts. M. Briquet, it is well known, directed attention to the amblyopia of hemianæsthesia, a condition in which reading is almost impossible from the generally confused grey appearance presented by the printed page; but we owe to M. Galezowski our knowledge that this is associated with colour-blindness, an affection which has been specially studied by M. Landolt in M. Charcot's wards. In the normal state, all the parts of the retina are not equally sensitive to all colours, but correspond to concentric circular areas, of which generally blue is the largest, next yellow, then orange, red, green, and finally violet is perceived only by the most central parts of the retina. In hysterical amblyopia these normal characters are exaggerated, the different circles restricting their limits concentrically in a more or less marked manner following the natural order. Thus the violet area may disappear entirely, then after a while green; red comes next in turn, then orange, yellow, and blue, the peripheral colours continuing to be perceived the last. To this there are some rare exceptions, in which red has been seen when yellow and blue had disappeared, but as an absolute rule violet and green disappear before the other colours. At a further stage all colours disappear, and objects have a neutral tint; finally, although very rarely, the case may end in true amaurosis. These changes principally occur in the eye corresponding to the hemianæsthesia; but it is usual for the field of colours to show itself diminished to some extent in the other eye as well. It is to be understood that these disturbances are not accompanied by any changes in the fundus appreciable to the ophthalmoscope. It must be added, moreover, that these phenomena may present the same mobility which characterises the class of hysterical affections, so that they may come and disappear suddenly, or, on the contrary, remain permanently. It is very rare for complete amaurosis to attack both eyes simultaneously. M. Charcot has often met with an interesting combination, in which the patient presents on one side a

little analgesia of the trunk and limbs, while the face on the same side is completely anæsthetic, and colour-blindness is complete for both eyes, or the peripheral colours are seen only with the opposite eye. M. Charcot has previously pointed out that there is nothing in these phenomena peculiar to hysteria, but that monocular amblyopia, with hemianæsthesia, occur in circumscribed lesions of the posterior part of the internal capsule, at the place which he calls the "sensitive quadrangle". This is of great interest, not only from a practical but also from a theoretical point of view, as the organic lesion capable of producing total hemianæsthesia of cerebral origin, seems also naturally the seat of those not yet appreciable changes sometimes called dynamic, and upon which hysterical hemianæsthesia depends. These latter lesions, indeed, probably are seated either in the fibres which traverse the quadrangle, or in their prolongations to the surface of the brain, or in both at once.

M. Charcot also referred to another disturbance of vision which he had frequently observed. Hallucinations of sight are common phenomena of hysterical delirium, and frequently appear in the intervals of convulsive outbursts, or after or even just before their occurrence. Thus a hysterical patient who is sitting quietly sewing, will all at once get up with a start and a cry; if interrogated she will say she thought she saw animals, cats, rats, etc., on the floor or the neighbouring wall. More rarely grimacing heads are their cause of alarm; moreover, these animals, generally black or grey, rarely bright red, are always seen on one side, that is, on the side corresponding to the hemianæsthesia and consequently to the amblyopia. They disappear immediately the eyes are turned directly towards them, but sometimes the hallucination is more persistent when the patient is at a period of a great nerve storm. These remarks were illustrated by the interrogation of several patients, whose answers bore out these remarks. These are the chief forms of hysterical defects of vision, but there are other much rarer ones, such as defects of accommodation, certain forms of diplopia, and especially the case shown by Galezowski.

M. Galezowski (*Progrès Médical*), after referring to M. Charcot's observations upon hysterical defects of vision, says that amblyopia is not the only affection, but that he has sometimes seen contractions of different muscles of the eye, amongst others the orbicularis and internal and external recti; also in exceptional cases it may affect the iris and the accommodating muscles, producing in consequence notable modifications of sight. In this latter case a permanent tension of the accommodating muscle is produced, which partially or entirely masks the normal refraction, or ametropia. In a case, of which the full notes are given, a hysterical woman suffering from hemianæsthesia presented, besides other muscular contractions, a myosis of both eyes which scarcely permitted the fundus to be examined; and, moreover, this patient, who had hypermetropic eyes, was affected by a myopia of 0.75 dioptries, which only momentarily disappeared under the influence of atropine. She has been treated by metallotherapeutics; silver alone seems to exercise any influence upon her sensibility, but at present nothing has been able to stop the spasm of the accommodating muscle. Spasmodic myopia, the result of hysteria, is unique, and Galezowski knows of no other case on record. Even independent of hysteria it is excessively rare, and he knows only of

some isolated cases. Thus Von Graefe observed tonic spasm of the accommodation twice; he considered it a reflex neurosis supervening consecutively to lesions of the sensory nerves. M. Galezowski has seen a case of acquired myopia with permanent contraction of the accommodating muscle in a young woman who tried to poison herself with opium; lastly, he has seen, in a case of ataxic syphilis, sent him by Professor Lasègue, very pronounced myosis, with acquired myopia. Contraction of the pupil is not rare. It is seen in locomotor ataxy, also in heart-disease, but in these cases the accommodating muscle is not involved. At present, no remedy seems of any use.

ROBERT SAUNDBY, M.D.

### LAILLER AND HILL ON IODOFORM.

IN a clinical lecture delivered at the Saint Louis Hospital in Paris (*La France Médicale*, October 20) M. Lailier said:—

Iodoform is a compound of iodine, hydrogen, and carbon, or the hydriodide of carbon, and was discovered by Sérullas in 1822. In 1834, Dumas gave it the name of iodoform, because of the analogy it presented to chloroform and bromoform. It is obtained by the action of an alkali upon an alcoholic solution of iodine, and it is a crystalline body in hexagonal lamellæ, of a brilliant lemon-yellow colour, and a peculiar penetrating and persistent odour, which is readily recognised when it has once been perceived. It is partially volatilised under the action of a moderate heat. While it is scarcely soluble in water, it is readily dissolved in boiling alcohol and ether. Among the physicians who have carefully studied iodoform is M. Bouchardat. Upon several occasions he has called attention to this product, and has demonstrated that it contains 90 per cent. of iodine. He has likewise discovered a special procedure for obtaining it. In 1860 M. Righini, of Navarre, of the Brussels Society of Medical and Natural Sciences, read a very complete memoir upon iodoform, which was written in a rather exaggerated style.

It would seem that in France first iodoform was specially studied and employed in a systematic and sustained manner. Thus, in 1853, Messrs. Moretin and Humbert presented to the Academy a work on the subject, which was followed by the inaugural thesis of M. Moitre, of similar title. But, in spite of all these interesting publications, iodoform was neglected for several years.

In 1859, when I was physician of the Lourcine Hospital, I began to employ it, and the favourable results obtained determined me to make a wider application of its value. During my service of three years I had no reason to regret this course. Upon my arrival at the St. Louis Hospital I had an opportunity to use it still more extensively, and to decide in the clearest manner as to its incontestable value. In order to be assured of this, it is only necessary to read the papers since published by Besnier, Demarquay, Féréol, Maillard, Nieszkowski, and Petiteau.

Up to the present time its use as internal medicament has given results of little value, as the researches of M. Righini and myself clearly show. This is a question which has yet to be studied.

Its topical action is very marked in a twofold direction—it is both anæsthetic and promotive of cicatrisation.

Its action as an anæsthetic permits us to make

use of it to relieve pain of fissures of the anus, hæmorrhoids, ulcerations of the throat, ulcerative cancers, and in particular those of the face, mouth, breast, and cervix uteri. The action of iodoform, in all these cases, is quite rapid. In order to use it to the best advantage, it should be reduced to a very fine powder, and be carefully applied to every part of the diseased surface. The simplest method of obtaining it in this form is to dissolve it in sulphuric ether, and then permit the ether to evaporate, when it is left in the form of an impalpable powder. In certain regions, particularly that of the anus, it is well to associate it with other substances, cacao butter, for example, as the suppositories thus made facilitate the application of the remedy. In general, the employment of the powder only is preferable, and I will add that you may employ it fearlessly in considerable quantity, as I have never seen accidents from such a course. I have never, it is true, made use of very large amounts at one time. But Demarquay, who has employed it in the treatment of a great number of wounds, *largè manu*, has never had occasion to regret it.

The action of iodoform, by which it favours cicatrisation, is quite as remarkable as its anæsthetic property. In general terms, it may be said that the substance modifies ulcers of every variety. It is often astonishing to note the rapidity with which, under its influence, favourable changes and cicatrisation occur, in soft chancres, ulcerative buboes, mucous patches, and syphilitic ulcerations of all kinds. Phagedæna is often arrested in its course by a few applications of powdered iodoform, and not unfrequently onychia is completely relieved in a few days after its topical use, though the last-named affection is well known for its rebellious character and its ordinary duration of several months.

You have seen the results obtained in my wards in all the cases just described. For some time past I have attempted, with success, to treat, by the employment of this remedy, scrofulous ulcers, lupus, and epithelioma. You can note the subjects of these various disorders in the wards, and the sensible amelioration of their condition which has resulted.

Under the influence of iodoform, inflammatory phenomena disappear, and granulations lose the flabby look which is characteristic of many scrofulous ulcers. In fact, it is often necessary to repress exuberant granulation by the employment of the stick of nitrate of silver. The wound, thus modified, rapidly cicatrises, and the progress accomplished in the space of one day only is often remarkable.

How does iodoform operate to produce these results? M. Féréol admits that, as a powder, it is inert; for myself, I believe that the iodine is the effective element, for, as has been said, the powder contains 90 per cent. of the latter.

I have hitherto referred merely to the value of the medicament. It remains for me to indicate the objections to its use. Iodoform has a most penetrating and insupportable odour, on account of which it is often necessary to abandon its employment, and, for the same reason, patients sometimes absolutely refuse the treatment. It would be well to dispose of this objection. Renaut, concurring with me in the belief that iodine is the active principle, concluded to make a compound of talc and iodine, which he termed "iodated talc", and with which various experiments were made by him in my wards. The results were fairly satisfactory, but much less perfect than those due to iodoform itself. It has also been thought that camphor in powder would serve as a



substitute, but comparative trials have not been favourable to the use of the latter. Its odour, truly, is not disagreeable, but then it presents none of the properties of iodoform; it does not modify the character of ulceration, nor act as an anæsthetic.

I have found nothing to replace iodoform, the latter having, in my judgment, more valuable qualities than inconveniences. Certain precautions are to be observed in its application. It should never be applied to other than perfectly clean wounds. A spray of warm water will answer for the purpose of cleansing them; then they should be carefully dried, and some powder applied. The fineness of the powder permits its entrance into all the anfractuosités of the ulcer. When it is applied, Féréol advises to cover the wound with charpie, oakum, or diachylon. The dressing may be repeated daily, or twice daily, at the outset—progressively less often as cicatrisation advances.

In order to better apply the iodoform to deep lesions, situated, for example, in the throat or in the neck of the uterus, I have devised a procedure, with which I have experimented for several days, and which has thus far given good results. It consists in dissolving one part of iodoform in ten of ether, and atomising the solution with Richardson's apparatus. By this means, the atomising tube being curved, and of sufficient length, the jet of the spray can be easily directed upon the parts mentioned, and all the diseased portions at once covered with a more or less thick layer (according to the requirements of each case), of a fine and impalpable powder, which adheres to the surface much more intimately and permanently than by other methods.

To give you an idea of the extent to which the employment of iodoform has increased, I append some figures which indicate the annual consumption of this product in the hospitals of Paris. In 1859, 250 grammes were used; in 1866, 600 grammes; in 1869, after the publication of the researches of Demarquay, Besnier, and Féréol, 20 kilogrammes; in 1871, the time of the siege, 33 kilogrammes; lastly, in 1875, 28 kilogrammes (about 56 pounds).

So you see this remedy has made its own way. It will remain in the arsenal of therapeutics, and render incontestable service when judiciously employed.

Mr. Berkeley Hill writes in the *British Medical Journal* of January 26, that, during the last three years the local application of iodoform, in dry powder, brushed lightly over the surface with a moistened camel-hair pencil, has been his almost invariable treatment of venereal sores, especially the local chancre. During the last few months he has often substituted a solution of one part of iodoform in six or eight of ether. The ether quickly evaporates, leaving a thin pellicle of iodoform, that as effectually stays the spread and produces healing of chancres as does the more copiously applied dry powder. Thus the surface is covered more exactly, and the disagreeable smell of the iodoform is too faint to attract attention. The sore is well washed with water and dried before the iodoform is applied, and the surface is lastly protected by a bit of dry lint. When the secretion is abundant, the dressing must be renewed twice daily, but in three or four days one dressing *per diem* suffices. Pain subsides at once; the sore is well in a week or ten days, and the chances of consecutive inoculation or bubo are greatly lessened. In a very few cases, the application of iodoform gives momentary smarting. Mr. Hill avoids using iodoform on inflamed sores, or on simple granulating wounds; but indolent non-specific

ulcers are rapidly improved by it. Lately he has given iodoform internally with great benefit in one-and-a-half grain doses as a pill with extract of gentian. Three pills are given each day, increasing gradually till eight or ten pills are taken in twenty-four hours.

Mr. Hill has used it with excellent effect in cases of obstinate syphilitic ulceration of the tongue, where the dorsum is covered with rugged thickened epithelium, constantly splitting into deep fissures, and thus causing continual severe pain. This affection is often quite insensible to mercury, alkaline iodides, or arsenic. In three of these obstinate cases, where the patients had been treated at intervals for years with the remedies just mentioned with little lasting benefit, the use of the iodoform pills was followed in two or three days by complete cessation of the pain, and the fissures healed rapidly, when the tongue soon shrank to its natural size. He has also given iodoform pills with great benefit in a case of ulcerated and protruding gumma of the left testis, non-ulcerating gumma of the right testis, with other syphilitic affections, and in one of intense pain in the head caused by syphilitic pericranial and cranial disease.

Articles on the uses of iodoform, by Mr. Wyndham Cottle, Mr. Lennox Browne, Dr. Prosser James, and Dr. Woakes, also appeared in the *British Medical Journal* of February 9.

#### BARTHOLOW ON PHYTOLACCA DECANDRIA AND GRINDELIA ROBUSTA.

In the *Journal of Nervous and Mental Diseases*, Dr. Bartholow gives some observations and experiments with *Phytolacca Decandria* and *Grindelia Robusta*.

*Phytolacca Decandria* is the common poke, which grows throughout the United States in great abundance, and has been prized very highly on the Southern plantations as a family remedy in rheumatism and various parasitic skin-diseases. Dr. Bartholow finds that its effects on rabbits and frogs are very similar to those observed in accidental poisoning with poke-berries in man; and hence he thinks that the results of such experiments might be received, without hesitation, as conclusively representing its true physiological action on man.

"*Phytolacca* is a most depressing and nauseating emetic, and has been proposed as a substitute for *ipécacuanha*; but the suggestion has never been acted on, because the action is so intensely disagreeable. Both in frogs and rabbits its nauseant effects are very obvious. When the frog is nauseated by it the under jaw drops, and he presents the most ludicrous appearance of intense disgust. *Phytolacca* is a specific emetic; that is, whether taken into the stomach or thrown under the skin, it causes nausea and vomiting. The gastro-intestinal secretions are increased by *phytolacca* and purging produced. Diffusion into the blood takes place with facility; but in what form, and what changes, if any, are induced by it in the composition of the blood, are quite unknown. It slows the cardiac movements and lowers arterial tension."

The heart continues in action after the entire cessation of the respiratory movements. This, he says, can be easily seen by paralysing a frog with it until all external signs of life have ceased, when, on opening the chest, the heart is still seen in action. But

it is a heart-poison as well as respiratory poison, although it affects the respiration most. Phytolacca affects warm-blooded animals similarly. "I injected a large frog intended for the table, with a drachm of the fluid extract. The first effect was sluggishness in all the voluntary movements, with increasing paresis. When a fore extremity was doubled up under the chest, he made no attempt to remove it. The paresis increased so that he could not jump, and the hind extremities were somewhat extended. The lower jaw dropped, and the mouth remained widely open. When now an extremity was sharply pinched, he manifested no sign of pain. In an hour there was complete muscular relaxation, and all external signs of life had ceased. On opening the chest, by dividing the sternum, the heart was found to be in action, feebly beating eighteen per minute. The metronome showed the heart's action becoming slow and its pulsations feeble."

At the end of two hours the effects of the dose had declined considerably; the frog made violent efforts to turn over, and at last succeeded. The action of the heart then rose to thirty. When he had turned over and assumed the usual sitting posture, he looked quite natural, notwithstanding the opening in the chest.

The experiments appear to show that phytolacca is a powerful paralysing agent of motility and sensibility, caused by the action of the drug on the spinal cord. When given to rabbits, it produced the following symptoms: "At first, excitement followed by stupor, weakness of the extremities, trembling of all the voluntary muscles, and especially trembling of the ears; increasing paralysis, both motor and sensory; contracted pupils; convulsions; death ensuing from failure of respiration."

The use of poke is yet entirely empirical. It is said to be alterative; used much in chronic rheumatism, constitutional syphilis, parasitic skin-diseases, unhealthy wounds, ulcers, and even cancers. It is used also in mastitis, and is said to have remarkable powers for preventing suppuration.

*Grindelia*.—This remedy comes from California. Its botanical name is *Grindelia Robusta*, and the leaves, stems, and flowers are the parts employed in preparing pharmaceutical products. The most eligible preparation is the fluid-extract. It contains an alkaloid and an oleo-resin.

Half a fluid-ounce of the fluid-extract was required to a rabbit. It has an acrid, bitter, disagreeable taste, very persistent. It increases the salivary and cutaneous secretions. The action of the heart becomes at first more energetic. The respiratory movements, at first hastened a little, become slower and fuller. At first, it increases the action of the brain, which is followed by mental calm, sleep, but not coma; the pupils are dilated, respiration becomes slow and deeper, and the rhythm normal. In rabbits, the condition of sopor is accompanied by a marked degree of muscular paresis beginning in the hind legs. The muscular contractility and nervous irritability remain normal, so that the paresis probably has its origin in the influence of the drug on the brain or spinal cord, or both.

Notwithstanding the paralytic effects, *grindelia* decidedly exalts the reflex function of the cord. When the frog no longer makes any movement, if gently tapped it will be thrown into tetanic convulsions. Death takes place from paralysis of the muscles of respiration, and the cavities of the heart are distended with blood (in the frog). The drug is eliminated by the kidneys. The oleo-resin is more

or less irritating to these organs, and increases the amount of urine. Its action on the kidneys is similar to that of *uva ursi*, *eucalyptus*, and *buchu*, whose activity is due to oleo-resin.

Dr. Bartholow has used *grindelia* with much success in the treatment of asthmatic paroxysms, and spasmodic cough from reflex causes; it is also useful in bronchitis and bronchorrhoea, and in catarrhal states of the genito-urinary mucous membrane.

The effects which *grindelia* produce on the cerebrum as a hypnotic and anodyne are strongly suggestive of a sphere of usefulness in the future. How far the anodyne and hypnotic actions, so conspicuous in animals, will occur in man, remains to be seen.

## KOCHER ON NEPHROTOMY.

THE following case is reported by Professor Kocher, of Bern, in the *Deutsche Zeitschrift für Chirurgie*, Band ix, Heft 3 and 4. A child, aged two years and a half, was brought to the author on July 10th, for treatment of an abdominal swelling which had commenced shortly after birth and had subsequently increased slowly in size. The abdomen, when the child was first seen by Dr. Kocher, presented a very prominent tumour on the left side. The right side of the abdomen was lax and tympanic, the left side very resistant, and occupied by a well-marked growth, which extended upwards behind the margin of the ribs, whilst its inner margin, which was rounded, stretched from the umbilicus outwards and downwards, to the middle of Poupart's ligament on the left side. No intestine could be felt in front of this tumour. The growth seemed to be spherical and very firm, and its surface was felt to be studded with cylindrical projections. It was freely movable upwards and downwards, and slightly so towards the median line. The urine was normal. Puncture of the swelling was attended with but a negative result, as the discharge consisted merely in some drops of blood. The case was diagnosed as one either of foetal tumour, of splenic tumour, or of a large new growth in the left kidney. On September 27th, after chloroform had been administered, the abdominal wall was increased, as in the operation of ovariectomy, from the apex of the ensiform process to a point midway between the umbilicus and the symphysis pubis. After the protrusion of a large mass of distended intestine, the tumour was exposed, the parietal layer of peritoneum in front of it being found much thickened and traversed by very many large vessels. This peritoneal covering having been divided and carefully dissected from off the tumour, the whole mass was readily shelled out from the fatty and connective tissue in the left lumbar region. The growth was then found to be connected with the left kidney, and was continuous with a short pedicle. This having been secured in a double catgut ligature, and then divided, the whole of the disease was readily removed. The peritoneal cavity having been carefully cleansed, the intestines were replaced and the edges of the extensive wound brought together by twenty catgut sutures. The little patient rallied quickly from the immediate effects of the operation, but on the following morning was very feverish. On the evening of the second day there was collapse, and on the next day after a slight attack of convulsions, the child died at 1 p.m. At the *post mortem* examination, traces of slight peritonitis were found. There was no fluid effusion into the cavity of the



peritoneum, but the coils of intestines were glued together and to the abdominal walls by shreds of soft fibrinous material. Professor Kocher attributes the fatal result to this peritonitis, and not to uræmia. There was compensatory hypertrophy of the right kidney, and the convulsions observed shortly before death were slight and not characteristic of uræmic poisoning. The operation was performed under antiseptic conditions, and the wound was carefully covered by antiseptic dressings; but, during the process of enucleating the tumour, the large mass of protruded intestine was not, the author thinks, sufficiently protected from atmospheric influences.

The tumour, which weighed 1,405 grammes (about 3 pounds), was examined by Professor Langhans. It was found to be enclosed in a tough capsule, and had evidently started from the centre of the kidney, as its superficial portion presented a thin streak of renal tissue, which was in direct contact with the capsule. The proper structure of the tumour was soft, of a reddish grey colour, and infiltrated with an abundant thin and clear juice. This structure, on microscopical examination, presented two elements; epithelium arranged in the form of gland-tubules, and a tissue very rich in cells and nuclei, and corresponding to embryonal connective tissue. Sparsely scattered in some parts of this latter tissue were to be seen fibres of striated muscle. The tumour was classed by Professor Langhans as an adeno-sarcoma.

In this contribution, Professor Kocher reports a second case of renal tumour. The patient was a female aged 35, and the mother of seven children. Distension of the abdomen had been noticed for twelve months, and nine months before she came under the notice of the author there had been a temporary attack of hæmaturia, with severe pain in the right iliac fossa. When first seen by Dr. Kocher the patient was very anæmic, and the right side of her abdomen was distended by a large, firm, and oval tumour, which was freely movable. It was found to be free from connection with the uterus and ovaries, but on rectal exploration a short pedicle could be felt reaching from its inner surface to the side of the spine. Abdominal section was performed, as in the first case, but the growth was found to be so closely adherent to the surrounding structures that it was decided not to attempt its removal. The patient died on the third day from acute peritonitis. At the *post mortem* examination a considerable quantity of flocculent effusion was found in the abdominal cavity. Professor Langhans, on examining the tumour, found that the right kidney had been entirely replaced by a very soft yellowish structure studded with patches of greyish transparent tissue, and irregularly shaped cavities containing blood. The tumour presented under the microscope all the characters of a pure sarcoma.

Professor Kocher states that but one other case has been recorded of removal of the kidney on account of new growth. In the twelve cases of nephrotomy reported by Nepveu (*Archives Générales de Médecine*, Février 1875) the operation was performed for other renal lesions, and, in the majority, in consequence of a wrong diagnosis. Notwithstanding the results of the operation in his two cases, the author argues in favour of the performance of nephrotomy in the treatment of renal cancer. The following facts in connection with this disease bear, he holds, on the question of treatment by operation: in 50 only out of 115 cases investigated by Rohrer were metastatic and secondary growths found after death; both kidneys were found involved, in ten per

cent. only of the total number of cases. Renal cancer occurs very frequently in early life, the subjects, in one-third of the number of cases, being under the age of ten years. If the growth be diagnosed at an early stage and when it is small, it may be readily removed through an incision made from behind in the lumbar region.

W. JOHNSON SMITH.

#### VOLKMANN ON GANGRENE OF THE TESTIS.

In surgical literature, some few cases are to be met with of spontaneous gangrene and sloughing of the testis, suddenly occurring in a previously healthy subject. Of somewhat more frequent occurrence are instances of spontaneous and severe orchitis, terminating in extreme atrophy. With the view of throwing some light on the causation of these singular morbid conditions, Professor Volkmann has recently reported (*Berliner Klinische Wochenschrift*, No. 53, 1877) a case of acute hæmorrhagic infarction of the testis, terminating in spontaneous gangrene. In this interesting case there are very many circumstances favouring the view of an embolic process, although there is an absence of sure and positive evidence on this point.

A youth, aged 15 years, whose health had previously been very good, and whose testicles had never been affected from injury or disease, was suddenly attacked on July 5 with severe pain in the abdomen, and diarrhœa and vomiting. On the following morning there was less abdominal pain, but much tenderness in the left testicle, together with considerable swelling of the corresponding half of the scrotum. At this time there was much fever, with thirst and headache. On July 8, the swelling and pain in the scrotum having considerably increased during the interval, the patient came for the first time under the notice of the author. He was then prostrate, and in a state of collapse, and the facial expression indicated acute peritonitis. The anterior abdominal wall, however, was lax, and free from tenderness, even on firm manual pressure. There was but moderate elevation of the temperature, the pulse was 100, and the respiratory and circulatory organs were in a normal condition. There was hard inflammatory œdema of the whole scrotum, and the surface of the left half was deeply congested, extremely tender, and very hot. With the exception of one spot on its anterior surface, the whole of the left side of the scrotum was as "hard as a board". Professor Volkmann diagnosed the case as one of spontaneous and acute suppurative inflammation of the tunica vaginalis, and at once proposed to lay open the supposed pus-containing cavity. Chloroform having been administered, and antiseptic precautions taken, an incision was made into the left half of the scrotum from a point over the external abdominal ring downwards. The edges of this incision gaped widely, exposing a considerable thickness of scrotal wall, that had been converted through lymphatic œdema into a firm transparent myxoma-like tissue. There was a free discharge of serous fluid from this wound, but the tumour did not diminish. After frequently repeated applications of the knife, the tunica vaginalis, of a dark blue colour, was exposed at the bottom of the wound. This membrane having been incised, exit was given to about a tablespoonful of black blood, and the testis, enlarged to four or five times its normal size, was exposed. The surface of the swollen organ

was smooth and glistening, and of an uniform deep-red colour. The surface of the epididymis was similarly congested, and the plexus pampiniformis was found to be filled with coagulated blood. The thrombosed veins were much distended, and presented numerous bulging processes, suspended from the surfaces of the epididymis and spermatic cord, and hanging down like berries within the sac of the tunica vaginalis. As there were no indications that gangrene had commenced in the testis, Professor Volkmann allowed the organ to remain, and concluded the operation by bringing together, though not into close contact, the edges of the incision, by means of sutures, in order to prevent prolapse. The seat of the operation was dressed antiseptically. On the following day the fever was much reduced, and the pain and swelling in the scrotum had commenced to diminish. During the after-treatment, the surfaces of the wound remained in an antiseptic condition. The discharge was scanty, and consisted in a yellowish serous fluid. The surface of the testicle exposed at the bottom of the incision presented, on the second day, a network of yellow streaks. On the twelfth day after the operation, there was no pain or abnormal swelling on the left side of the scrotum. At this period it was quite evident that the testicle had undergone necrosis. The dead and mummified organ protruded more and more from the surface of the scrotum, and, early in the following month, was detached in two portions, leaving but a very small living portion of the epididymis behind.

Microscopic examination of numerous portions of the necrotic mass gave an invariable result, and proved the total absence of any signs indicating that the hæmorrhagic infarction had been preceded by an inflammatory process. In no part of the interstitial testicular tissue could any traces of progressive histological changes be discovered. No indications of wandering processes could be seen, and no accumulation of lymphoid elements. All the objects that could be seen were vessels extremely dilated and distended by red blood-corpuscles, and, here and there, extravasated blood in various stages of metamorphosis, with blood-pigment either free in the tissue, in the form of scales and granules, or inclosed in cells. The epithelium of the seminal tubules was clouded.

W. JOHNSON SMITH.

## HAMILTON ON FRACTURE OF THE SHAFT OF THE FEMUR IN CHILDREN.

THE following lecture, delivered in the Bellevue Hospital by Dr. F. H. Hamilton, and published in the *New York Medical Record* for January 5, is supplementary to that on fractures of the femur published last month.

Gentlemen,—Having in my last lecture spoken of the fractures of the shaft of the femur in adults, I now come to speak of fractures of the shaft of the femur in children, that is to say, in persons under twelve or thirteen years of age.

In reference to the pathology of these accidents as occurring in adults or children, there are several points of difference. In adults the fractures are almost always oblique—very oblique; the line of fracture is relatively smooth, and the fragments overlap very much, while in children the fractures are often nearly transverse, denticulated, and not frequently, especially in very young children, only partially separated and not at all overlapped—in short

they are apt to partake more or less of the character of a “green stick” fracture. If overlapping occur, it is usually to a limited extent, because the muscles have so much less power to cause displacement in this direction. The fragments are bent or thrown out of line easily, but there is little or no displacement in the line of the axis of the bone.

With these facts before us, we shall understand that the indications of treatment differ considerably in the cases of the adult and of the child. Surgical writers have not sufficiently considered these differences, but they have generally said, or left it to be inferred, that the same plan of treatment was applicable to both, and that the prognosis did not differ essentially. I do not think so. The indications are, in fact, in some sense reversed. For, while in adults the first and most difficult indication is to overcome the shortening occasioned by the obliquity of the fracture and the powerful action of the fully developed muscles, and the second is to keep the limb in line—here, in the case of children, the first and most difficult indication is to keep the limb in line, and the second is to overcome the action of the muscles, or this second indication may not be present at all.

Let us look at the usual modes of treatment of broken thighs in children, and see whether they are suited to these changed conditions.

The *double-inclined plane*, the thigh being flexed upon the body, shortens the already very short limb, and in many cases the plane of the splint does not support or take hold of the upper fragment at all. These fractures in children are generally near the middle; but even when they occur lower down, the space between the fracture and the groin is too short to allow the thigh-piece of the splint to give adequate support. All the lateral or coaptative splints are subject to the same objection in children, especially when the limb is flexed. I have tried these machines often in my earlier experience, and they gave me infinite trouble and disgust; they had to be readjusted daily, and if I got a good result it was a mere matter of accident.

The *plaster-of-Paris* dressing, in which we put the limb always in the straight position, has also serious objections, especially in the case of infants. In proportion as the child is younger, the danger of strangulating the tissues and causing gangrene is greater; indeed, it is in children that most of these terrible accidents have happened from tight bandages. Their tissues are soft and yielding, and bandages of any kind, whether made of dry rollers, plaster-of-Paris, paste bandages, or anything else, applied with sufficient tightness to support the bones (which lie deep under these soft tissues), will be liable to cut off the venous or arterial circulation. The veins and arteries will feel the pressure before the bones do. For this reason, they cannot be applied with sufficient firmness to give the requisite support. Besides this, they are liable to the same objection, as in the case of adults, that the limb will shrink, and they will soon be loose and have to be renewed. They soon became soiled in the groin by the urine, and they become fouled by the fæces. Nor can any amount of ingenuity and care generally prevent this. The urine gets under the splint and causes excoriations of the delicate skin, and the little sufferers are in torment until it is removed.

The *straight position*, with *short side or coaptation splints*, and the *single long side splint*, with *pulleys and weights*, or such an apparatus as we have found best for adults, fails again in the case of infants and



children. Imagine an infant three or four years of age, in an apparatus of this sort, with his left thigh broken. His right thigh and leg are free, and he can and will put it where he pleases. He will throw it over his broken leg, draw up his foot and roll himself over, and thrash about constantly, for there is nothing to prevent it, and this is the nature of a child. In doing this the fragments are constantly disturbed, and a vicious union is likely to occur.

I believe we have found a better method than either of these—a remedy for most or all of these evils, in the apparatus which you now see before you, and which is the result of my own experience, aided by the occasional suggestions of my pupils.

This child, with a fracture of the right femur, is dressed as follows.

Here are two long side splints, each about four inches wide and half an inch thick, extending from within two or three inches of the axillæ to four or five inches beyond the bottom of the feet. At the lower extremity these are united by a cross-bar, of such a length that, when the splints are pressed against the sides of the body, they—the splints—shall be separated from each other farther at their lower than their upper extremities, by two or three inches. This is an arrangement suggested to me first by Dr. Frank H. Bosworth, while he was my house-surgeon, to prevent in some measure the child from wetting the dressings, by keeping the legs a little more asunder.

The two long side splints must be well padded to fit all the inequalities of the sides of the body and limbs. Thus prepared, this double splint is laid upon the bed enclosing the body and legs of the child. The sound limb is now secured by successive turns of the roller, from the foot to the groin, to the corresponding long splint. Then the broken thigh is extended to its proper length, and the corresponding foot and leg are secured by a roller to the long side splint. It is better to do this before applying the short or coaptation splints to the thigh. Indeed, I sometimes omit these latter for a few days, or until the little patient has recovered in some measure from the bruises and swelling which are apt to accompany the fracture; but I will suppose you have found it proper to proceed at once to apply the coaptation splints, as they are applied in this case.

The coaptation splints, three of them, may be made of binders' board, thin pieces of wood, for example, or of cloth-felt, such as I have used during the last few months a good deal. This is not the felt made of woollen, of which I have spoken in my *Treatise on Fractures*, nor is it the felt manufactured from wool; but it is a material used by hatters to make the rims of a certain class of summer hats. It is made of cotton-cloth, four or six thicknesses, and gum shell-lac. It is capable of being moulded a little more than pasteboard, under the application of heat. For many purposes I like it very much.

The top splint, or front splint, must extend from the groin to half an inch from the patella. It never should touch the patella. The outside splint should extend from the top of the trochanter major to the external condyle, or lower if the fracture is low down, and the inside splint from the groin, or near the groin, to the internal condyle. Under each splint of felt or binders' board lay a piece of sheet-lint a trifle larger than the splint, or a piece of woollen cloth. In the case of very young children I omit to sew a cover upon these splints, because they are apt to be soiled, and need to be changed often. You

have prepared three splints, one for the front and one for each side; but you must not omit the fourth splint, which is the back splint. This must be firmer, wider, and longer than the others, and must be made of heavy sole-leather or of wood, or, if anything else be used, it must be firm. The limb is to rest on this as a sort of bed, and it ought to extend from just below the tuber ischii to three or four inches below the knee. It should be carefully padded to fit the inequalities of the limb, and covered with cotton-cloth to keep the padding in place, and to fasten the circular bands to it. The upper end, for three or four inches, or more, may be covered with oiled silk. Now stitch the centre of six or seven strips of cotton cloth, each about one inch in width, to the back of this fourth splint, and put all the splints in their proper places, bring the strips to the front and tie them in bow knots, over the front splint. Do not include in these strips the long side splint. If you do there will be danger, when the body sinks upon the bed, that the thigh will bend at the point of fracture. In both my work on *General Surgery* and in my *Treatise on Fractures*, the broken thigh is shown as bound to the long side splint. A later experience has taught me that it is not always well to do so.

It remains for you to pass a broad band around the body, near the top of the long side splints (including the splints), and another broad band under the nates, leaving a hole for defæcation. The upper band keeps the child in the recumbent position, and supports his back when he is taken up. The lower one only supports the nates and thigh when he is taken up, and if fastened on each side (stitched) to the long splints, it need not pass in front of the body. You may have to change this occasionally.

For many cases the apparatus is now complete; but in most cases it is safer to employ a perineal band, carefully made, soft and flat, and which may be passed through either perinæum—it is not very material which—and made fast to the top of the corresponding long splint. For this purpose you can fold a two-inch roller longitudinally, inclosing, where it passes through the perinæum and under the nates, about six folds of paper, with a little cotton-batting on the side to be laid against the skin. Stitch this properly, and before laying it against the perinæum, protect the parts with a strip of sheet lint. The object of the folded paper is to prevent it from crumpling and making a sharp cord. This perineal band is to be kept only moderately tight, and may be loosened and changed as often as you please. I repeat that sometimes it is not needed.

You have now an arrangement by which you can keep the broken limb in a straight line and quiet, and in which you can remove the patient at any moment, and change the bed. You can, if you choose, take him out of doors.

In children five or six years of age, or older, if necessary, you can add to this extension by a pulley and weight, using about three pounds for a child of four years, and one additional pound for each additional year of life.

I have taken a great deal of pains, gentlemen, to describe all the details of this dressing, because upon these details, in a great measure, your success will depend; and I repeat that, of all the various means I have tried, none have served me so well as this, and I have used this very often for a long time. My friends have been uniformly pleased with it, so far as I am informed, and Mr. Erichsen told me, when in

New York, that it was used very satisfactorily in some of the London hospitals.

Don't omit, gentlemen, to look daily after the back splint, and see that it is in place.

Fortunately these bones unite quickly (generally in three or four weeks); but it is prudent to keep on the apparatus five or six weeks, and not even then to allow the child to walk. If you follow my directions carefully, and take the proper pains—looking after your patient daily—you will always get straight legs, and in most cases there will be no perceptible shortening, and what little may occur will never cause the slightest halt in the gait. This has been my uniform experience since I began to use this dressing, and I have used it now for more than twenty years.

NOTE.—Dr. K. of this city has just informed me that he had occasion a short time since to assist Dr. W. in dressing a simple fracture of the thigh in a child three years old. The plaster-of-paris dressing was applied in the usual manner, and when removed, at the end of four weeks, the bone was found united, with a shortening of two and a half inches, and very crooked. During these four weeks it had been once removed and reapplied.

I venture to say that, with the plan of treatment described in my lecture, such a result would have been impossible. Indeed, I might almost say that such a result would have been impossible with any other plan of treatment than the plaster, or such as would conceal from the surgeon a knowledge of what was transpiring.

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#### PILCHER ON THE TREATMENT OF INJURIES OF THE WRIST-JOINT.

In the *Proceedings of the Medical Society of the County of Kings* (December 1877), a remarkably suggestive paper appears under the heading, *Reason versus Tradition in the Treatment of Certain Injuries of the Wrist-joint*, by Dr. L. S. Pilcher. It is learned and thoughtful, and, from its practical bearing, has a high claim to the attentive consideration of surgeons.

Although his observations have a bearing upon the treatment of injuries of most joints, the writer confines himself to dealing with that of the commonest, lesions from violence to the wrist. In doing so, moreover, he excludes from his consideration of the question "simple contusions and the lighter sprains, producing but a trifling and temporary inconvenience;" also "compound dislocations and fractures, accompanied by such extensive disorganisation of the parts, as to demand in their treatment exsection of portions of bones or amputation, as alike foreign to the scope of his inquiry."

Dislocations of the carpus he also deems it unnecessary to specially consider, first, because of their extreme rarity, and, second, because, when once reduced, such luxations may be regarded as bad sprains. Dislocations of the lower ends of the radius and ulna, too, he places in the same category. In fact, he deals only with the question of severe sprains.

The author starts with a definition of a sprain and its effects as follows.

Any injury sustained by the structures composing an articulation from movements executed by it, either in an improper or to an excess in a proper direction, without displacement of the corresponding articular surfaces from each other, is a sprain. In the lighter

sprains, an overstretched ligament, with perhaps some of its fibres lacerated, may constitute the sum of the damage sustained. In the more severe, contused articular cartilages, torn ligaments, overstretched tendons, bruised nerves, lacerated muscles, ruptured blood-vessels, and infiltrating blood, combine to produce an injury of the gravest importance.

"Between these two extremes every grade of severity of sprains may be presented. From all alike, by neglect, improper treatment, or a peculiar constitutional vulnerability, disastrous consequences may result."

He then addresses himself to the problem, "How to treat them (severe sprains), so as soonest to restore the healthy formation of the joints implicated, and at the same time the most surely to prevent the development of unpleasant sequelæ." In doing so he advocates a very different line to that generally followed in dealing with sprains, but adduces remarkably good reasons, theoretical and practical, in support of it.

The traditional treatment of sprain having the one great end in view, namely, the *prevention of inflammation*, rest, and immobility, have been and are recognised as of all things the most important by all the great authorities in surgery.

But, under this treatment, the results, in the experience even of the greatest surgeons, are anything but satisfactory; and the author, after reviewing the best opinions, expresses the general conclusions to be gathered from them thus. "After severe sprain, with every care in the use of the means sanctioned by authority and tradition, tedious convalescence and prolonged weakness and tenderness of the joint are the rule, rapid or perfect recovery the exception."

Passing on to the question of actual treatment, he says that a step in the right direction was made by the introduction of the "immovable apparatus"—*e.g.*, plaster, starch, etc. But he believes that the perfect rest and immobility thus secured, should not be credited with the beneficial results so much as the compression which is exercised on the injured part, especially when early applied. That it should always be so he urges on many grounds; and, in support of this view, adduces the experience of Mr. S. Gamgee, who says that *from the first* the patient can bear well-applied pressure; and that the latter is the surest way of checking effusion in severe sprains, as well as of securing its rapid absorption when it has occurred.

Further, this immovable apparatus is usually left on much too long. This leads him to speak of the conclusions which are the basis of his paper, which, although somewhat startling, he nevertheless defends very successfully in our opinion, *viz.*, that a new doctrine, which has been some years on trial, and which is directly at variance with the old system of treatment, is the most rational. This doctrine is embodied in the words *compression, motion, use*.

From the time when this line of treatment was first advocated by Hood in England, down to the present, he says the experience of many shows that immobilisation from the first is not absolutely necessary for the successful treatment of sprains. Nay, he goes further, and alludes to many cases where free and thorough movement immediately after the injury has been productive of the greatest good. Out of a hundred cases of severe sprain treated by himself by this "Hood method", *viz.*, compression and mobilisation, he has had nothing to regret in any. Those patients improved most slowly who would not follow the directions to move the joint freely and fully, but, from dread of hurting themselves, kept the parts at rest.



Here, then, is the nucleus of his principle of treatment of sprains, mobilisation, use, as contrasted with the old system, rest and immobilisation.

He then submits a number of common pathological theorems, based upon the teaching of such men as Hunter, Paget, and Simon, as showing that there is nothing that is not rational in this new principle of treatment. From them, further, he adduces the following practical conclusions.

"The swelling and congestion consequent upon a sprain by no means necessarily involve the presence of inflammation.

"Primary active hyperæmia and secondary passive hyperæmia constitute the essential pathological conditions present. The more intense the former the more prolonged the latter.

"The first is of short duration, not longer than three days, the duration of the latter is variable. It may be effected by treatment, it may terminate in inflammation, in the development of which it is a most important factor.

"There is no reason inherent in the nature of a sprain why the general law that *subcutaneous injuries seldom inflame* should not apply to it."

Without going into details, the treatment he appears to indicate, based upon these conclusions, is as follows:

In the first short stage of active hyperæmia, rest, hot water, and the bandage carefully applied from the first; but this plan must only be pursued for a short time, if at all, for "the caution which reason gives is, not that care should be taken not to move the parts too soon, but that care should be taken not to delay moving the parts too long";

In the second stage, or that of passive hyperæmia, compression and support by well-applied bandage, together with the manipulations of *massage* and free motion of the joint.

Of *massage* as a means of furthering absorption, relieving stasis, and encouraging the free circulation so necessary for repair, the author speaks most highly. And from having watched the results of the treatment by Dr. Metzger (the originator) years ago in Bonn, we are inclined to go a long way with him, and with those in Germany, whose opinions on Dr. Metzger's system he quotes. This kneading and rubbing of the part does for it what the patient will probably not do, on account of pain, by free movements of the joint.

Finally, the treatment of sprains of the wrist, which offers a good opportunity of seeing the benefit of this system, on account of its liability to stiffness, etc., from the great complexity of its structure, should be as follows.

In the first place, he conceives the most important element to be *motion*; and this, not restricted or tentative, but full, decided, and at regular intervals, though not necessarily frequent; next *massage*, next *support* and *compression*, by the application of a bandage encircling the joint, or by strapping.

"Rarely will it be necessary to resort to absolute rest and fomentations during the first two or three days, never after that time." The following quotation summarises very well several points in the question. "Rest, immobilisation! Mobilisation, use! The old and the new! In support of the former, venerable tradition and great authorities; of the latter, few names and some recent experience. Placed in the crucible of clinical observation, the results given by the former are confessedly tedious, uncertain, often unsatisfactory, sometimes disastrous; by the latter certainly no worse—they could not well be—on the

contrary, if its advocates may be believed, rapid, reliable, complete." A. E. BARKER.

## ANATOMY AND PHYSIOLOGY.

FRANCK AND PITRES ON THE PHYSIOLOGY OF THE CENTRUM OVALE AND INTERNAL CAPSULE. —MM. Franck and Pitres have communicated to the Société de Biologie in Paris the results of certain experimental investigations undertaken by them with the view of testing the conclusion arrived at by pathological study, that the white fibres which start from the excitable regions of the convolutions and connect them with the central parts of the brain, are grouped in distinct bundles which preserve their functional independence throughout their course in the white matter. For numerous pathological observations have demonstrated that lesions of the white matter may give rise to paralysis limited to certain groups of muscles, which could not be explained unless the fibres from the cortical motor centres were grouped in distinct bundles. In these experiments, MM. Franck and Pitres have proceeded by removing successive horizontal slices of the hemisphere, and by exciting the different parts of the cut surface after each mutilation. In this way, they were able to obtain isolated movements similar to those resulting from stimulation of the centres of grey matter. Even in the internal capsule and at the base of the corona radiata the fibres maintain their independence, and by stimulation movements may be produced limited to certain groups of muscles on the opposite side of the body. In order to succeed in this the points of the electrodes must not be separated more than from two to four millimetres. In the dog, it is only the anterior half of the surface of section of the internal capsule which is excitable, and the fibres group themselves as follows.

1. Quite in front are the fibres which determine the movements of the face and eyelids on the opposite side.

2. Next, behind the last, are the fibres going to the anterior limb of the opposite side.

3. A bundle whose excitation caused movements in both limbs of the opposite side.

4. A very small bundle for the posterior extremity only.

5. At the level of the posterior part of the nucleus caudatus is a bundle whose excitation causes elevation of the ear on the opposite side.

These experiences, therefore, amply confirm the data of pathology so far as the centrum ovale is concerned. At first sight, they might appear to contradict our well-established opinion that injuries of the internal capsule cause total hemiplegia; but it must be remembered that, in order to produce these limited results, the electrodes had to be closely approximated; now the immense number of the pathological alterations are coarse lesions, hæmorrhages, or softenings; such limited lesions as would fairly correspond to the three experiments must be exceedingly rare. On the other hand, these experiments afford a satisfactory explanation of many obscure facts. We know that a patient who has been attacked by hemiplegia recovers the use of his leg while his arm remains quite useless, or the arm may quite recover while the leg is permanently contracted, or the face may be the part in which the affection first disappears or remains for life. These pheno-

mena are fully explained by the different degree to which certain fibres are affected. The analysis of some cases in M. Charcot's wards serve to indicate that paralysis predominates in the upper extremity when the lesion is most marked on the anterior part of the capsule, and in the lower extremity when the lesion is seated on the posterior part of the motor portion of the capsule.

ROBERT SAUNDBY, M.D.

SCHIFF ON A NEW FUNCTION OF THE LIVER AND ON THE EFFECT OF LIGATURE OF THE PORTAL VEIN.—Dr. M. Schiff (*Bibliothèque Universelle et Revue Suisse*, 1877, and *Centralblatt für die Medicinischen Wissenschaften*, January 5) ascribes the rapid death of mammals after ligature of the vena portæ to the accumulation of a narcotic or toxic substance resulting from the change of tissue, which in normal conditions is usually destroyed in the liver. To render this hypothesis acceptable, it had to be proved that this substance is really present, and becomes active when removed from the influence of the liver. If it cannot be isolated, it must at least be proved that the blood of an animal killed by ligature of the vena portæ acts deleteriously when introduced into the body of another animal, and it must further be shown that the liver is capable of destroying other narcotic substances, the general action of which is well known. The latter method, being the easier, was first tried; and it was found that, while atropin injected into the tissues of a frog destroyed life, it failed to do so when introduced directly into the intestine, if it did not come into contact with the œsophagus or with the lower part of the rectum, even when the dose was doubled. The same was observed in dogs whose kidneys had been extirpated in order to prevent elimination by these organs. A not too concentrated solution injected into the branches of the portal vein, into the substance of the spleen, and the membranes of the bowels, produced no results. A frog whose liver had been ligatured died after the injection of one-eightieth of a drop of nicotin into the lymph-sac; while the same quantity produced no effect on a frog in the normal state. Dr. Schiff has also shown that in oviparous animals the hepatic circulation can be raised by tying the renal veins. According to the hypothesis, this increase of the hepatic circulation should modify the toxic action of nicotin; and, in fact, frogs treated in this way survived the injection of one-twentieth or even one-fifteenth of a drop of nicotin into the lymph-sac. But, while the fatal action of nicotin is affected in this way, there still remain other results—an alteration in the breathing or pulse, and the effect on the vagus nerve. These symptoms do not imperil the life of the animal, but appear to show that the liver prevents only a portion of the symptoms produced by nicotin. Hyoscyamin acts in the same way as nicotin.

A cubic centimetre and a half of blood from the right heart of a dog which had died about three quarters of an hour after ligature of the portal vein, was injected into frogs whose liver had been tied. These frogs in a short time showed symptoms of severe general depression, which in some cases passed off, while in others it ended in death.

A. HENRY, M.D.

MUNK ON THE PHYSIOLOGY OF THE CORTEX CEREBRI.—Dr. Hermann Munk (*Berlin. Klin. Wochenschr.*, No. 35) has performed experiments which consist in extirpating in dogs the grey matter

of the convolutions to the extent of fifteen millimetres, and to a depth of two millimetres. He has been thereby led to admit the existence in the grey cortex of the cerebrum of a sensorial zone capable of receiving visual and acoustic sensations. This sensorial zone is situated behind the motor region, and is separated from it by a line extending from the fissure of Sylvius to the falx cerebri. If in Dr. Munk's experiments a certain point in the occipital lobe were injured, the animals lost the remembrance of images presented by the sense of sight, and therefore found it impossible to recognise objects which were familiar to them; if, on the other hand, a certain point of the parietal lobe were extirpated there was loss of memory of acoustic sensations, and the animals, for example, could no longer recognise the voice of their master.

These disturbances of memory, however, disappeared in from four to six weeks. Dr. Munk has, therefore, been led to ask himself if the portion of grey cortex bordering on the sensorial zones is not capable of supplying their functions. To elucidate this point he practised consecutively extirpation of the neighbouring parts, but the animals always succumbed to fatal meningitis. Wishing to ascertain if the suppression of visual and acoustic impressions would have any influence on the development of the grey convolutions, Dr. Munk practised on puppies of the same litter from four to six days old, mutilation of the eyes or ears. At the end of from twelve to fourteen weeks he ascertained that the sensorial zones of grey matter corresponding to the injured organs had undergone an arrest of development. In the blind dogs the frontal lobe showed an exaggerated development; in the dogs that had been rendered deaf the occipital appeared to be unusually developed.

A. M. H.

SCHÖN ON THE CHIASMA OF THE OPTIC NERVE.—In a discussion at the Ophthalmological Congress, held in 1877, of a paper by Dr. Schmidt-Rimpler on the decussation of the optic nerve, Dr. Schön stated his belief that the commissure at the chiasma was developed, like the other commissures of the brain, to a variable extent in different individuals; and that it constituted only a portion of the crossing of the optic nerves, which he supposed to take place in part in the interior of the brain. He cited, in relation to this opinion, the observation of Dr. Flechsig, that the decussation of the anterior pyramids of the medulla is developed to a different extent in different individuals.

B. THOMPSON LOWNE.

#### RECENT PAPERS.

The Foramen Supracondyleum Internum in the Human Humerus. By Dr. H. Leboucq. (*Annales de la Société de Médecine de Gand*, Dec. 1877.)

#### PATHOLOGY.

KRÖMER ON DEPOSITS OF BONE IN THE ARACHNOID.—In a paper in the *Allgemeine Zeitschrift für Psychiatrie*, Band 34, Heft 5, Dr. Krömer gives an analysis of the reports of 196 *post mortem* examinations in which deposits of bone are recorded as having been observed in either the spinal or the cerebral arachnoid. The accounts of 996 necropsies of insane patients, extending over a period of 20 years, were searched, and in 196 instances



(nearly 20 per cent.), the deposits were found to have been noticed.

Bony or cartilaginous plates are not unfrequently found in the arachnoid in cases of long-standing insanity. They are most common in the lumbar region of the spinal cord, and on its posterior aspect. Among the 196 cases they were only five times found on its anterior aspect, and in three of these they existed posteriorly as well. Less frequently similar plates of bone are found in the arachnoid over the convexity of the frontal lobes of the cerebrum; this occurred in nine cases. These bony plates vary almost indefinitely in size, number, and form; they have also been frequently found in the bodies of sane persons and in cases of tetanus, chorea, epilepsy, etc. That they are not peculiar to any one form of disease may be seen from the fact that the 196 cases now under examination are divided as follows: Mania, 9; melancholia, 17; epilepsy, 9; paralysis, 39; idiocy, 1; secondary psychoses, 121.

It will be observed that a very large proportion of the cases were those of chronic incurable lunatics. This arises from the fact that this class of cases is always most numerous in asylums, and affords most opportunities for *post mortem* examinations. These are the patients who live many years, and in whom the bony plates of the arachnoid may be rightly regarded as indicative of senility. Besides actual length of years, however, there is a premature old age, which is brought about by long-standing disease of the central nervous system more often than by anything else. In 145 of the 196 cases, the age was known. There were 12 between 20 and 30; 39 between 30 and 40; 45 between 40 and 50; 23 between 50 and 60; 17 between 60 and 70; 9 between 70 and 75. The largest number was, therefore, between 40 and 50; the average age of the 145 persons was only 41.24. No age under 60 can usually be termed "old age", but the appearances of premature decay in these cases are exactly similar to those of true old age, so that the occurrence of bony plates in the arachnoid may rightly be considered an indication of senility.

The causes of death in the author's cases are very various, and need not be given here; 128 of the patients were males and 68 women, but there seems to be no reason why one sex should be more liable to arachnoid ossification than the other.

In support of the theory that the bony plates in question are due to senile decay, the reports of the 196 necropsies have been searched for records of changes in other organs of the body indicating premature decay, and a tendency to deposits of bone and cretaceous matter. These have been found in plenty. In 139 cases the calvarium was very heavy and thickened, while in 27 cases no mention is made of its condition. In 104 cases mention is made of the condition of the sutures; in 29 skulls these had entirely disappeared; in 37 they were completely ossified and overgrown with various bony deposits; in 38 cases the sutures had only partly disappeared, this being especially the case on the interior aspect of the skull. The grooves for the meningeal arteries were mostly much deepened by the heaping up of bone on either side of them. This adventitious bone often closed over them so as to convert them into a canal; frequently it had quite obliterated the lateral branches of the vessels, and often presented sharp irregular edges and points. In 101 out of 114 cases in which the condition of the grooves had been noted, some of the above appearances were recorded.

In 42 instances, bony prominences or exostoses on various parts of the skull had been noted.

Degenerative changes in the cartilages are also usual in these cases; they consist in brittleness, cretification, ossification, fatty degeneration, etc. In all of the 128 cases in which any report as to the condition of the cartilages is to be found, some of the above are recorded.

In almost all cases of general decay the circulatory system is affected, often, indeed, sooner than any other tissues. In 83 cases the vessels (usually the aorta) are reported as atheromatous; in 46 the large vessels at the base of the brain were noted as having been similarly affected. In a large number of the other cases the vessels are described as "gaping, rigid, thickened," etc. The condition of the vessels of the spinal cord is only mentioned in 15 cases; in all of these they are described as tortuous and dilated. The cardiac valves are stated to have been more or less insufficient, owing to thickening and cretaceous deposits in 54 cases; only seven times is hypertrophy of the ventricles noted; in three cases the heart is described as remarkably small and soft.

The membranes of the brain and spinal cord showed a tendency to opacity, thickening, and the formation of chalky and bony deposits. The dura mater seems to be less frequently affected than the pia and arachnoid; it is reported to have been "thickened, not translucent, and containing chalky deposits" in 32 instances; in the remaining cases it presented no marked pathological change. In only 19 cases out of the whole number are the pia and arachnoid reported as having been healthy; in 140 morbid appearances existed; no record was found of their state in the remaining 37.

The author considers that all the above-described appearances, showing a tendency to cloudiness of the tissues, degeneration, deposits of cretaceous and bony matter, indicate senility and decay. They are the appearances of old age, and if they exist in earlier years they are a sign of a want of vitality, a sign that the organism is already approaching its end. They cannot, therefore, be regarded as peculiar to any form of psychic disease, but may as easily affect sane persons of senile habit.

Virchow says that the bony plates of the arachnoid are never of a cartilaginous nature, but proceed from a firm osteoid deposit, having a structure similar to that of bone-cartilage (*knochenknorpel*). This he describes as made up of a number of layers, some arranged concentrically and the others being parallel; it contains star-shaped bodies in a slightly striated but nearly homogeneous matrix. The arachnoid plates have the appearance of cartilage to the naked eye, and are, moreover, somewhat pliable; they are always covered by a thin layer of the arachnoid itself. Krömer upholds Virchow's view as to the true bony nature of these deposits.

CHAS. S. W. COBBOLD, M.D.

CARTAZ ON DEVELOPMENT OF CANCROID ON A PATCH OF PSORIASIS OF THE FINGER.—The patient, whose case is described by M. Cartaz (*Progrès Médical*, No. 1, 1878) had had amputation of the finger performed for epithelioma. He was a man aged 40, in good health, never having had any other disease than psoriasis, which had commenced twenty-three years previously. His father and mother had not suffered from rheumatism nor from cutaneous affections, scrofula, or syphilis. The psoriasis began at the elbows, then showed itself at the sole of the foot, and successively in different parts of the body;

traces of it were found on the arms, the two hands, the knees, the sole of the foot, the chest, and the left groin. The nails of the hands were completely deformed by the disease. Fifteen years ago there appeared the first symptoms of pulmonary emphysema, which varied in severity according to the extent of cutaneous eruption, and markedly increased at the disappearance of the psoriasis. The psoriasis had caused on the palms of the hands and the soles of the feet large warty scales, varying in size from the head of a pin to a bean. During September, 1876, in consequence of frequent scratching of one of these growths situated on the palmar surface of the ring-finger of the right hand, in the middle of the second phalanx, the scab was torn off and a little ulceration was caused. As a result of irritation the edges began to fungate, and little by little the ulceration extended, and last May he presented himself at the Hospital St. Louis with an ulcer as large as a sixpence. Poultries and friction and huile de cade were prescribed. Later on, it being thought that the case was of syphilitic origin, specific treatment was employed, and diachylon was used as a dressing. This treatment was continued for a month with no success. The wound was then cauterised severely with nitrate of silver with the sole result of causing an abundant hæmorrhage, and a rapid increase in the size of the ulcer. When the patient came under the care of M. Cartaz the ulcer measured four centimetres (more than  $1\frac{1}{2}$  inch) across; it had rounded callous edges, and a granulating base, and bled at the slightest touch, presenting all the characteristics of cancrroid. Further, a small, hard, movable, indolent gland, which the patient had not perceived, was found near the elbow, but nothing of the kind in the axilla. The diagnosis of cancrroid was established, and it was decided to amputate the finger. The operation was performed on November 10 by metacarpo-phalangeal disarticulation. The patient perfectly recovered.

A. M. H.

**BENNETT ON THE CALCIFICATION OF ADIPOSE TISSUE.**—In a paper published in the *Dublin Journal of Medical Science* for January, Dr. E. H. Bennett calls attention to a pathological condition which, so far as he knows, has not been witnessed by others—calcification of adipose tissue. By this he means a calcareous deposit in the connective basis of the tissue, not in the contents of the cells.

In the subcutaneous tissue of the anterior aspect of the leg in elderly women, small hard bodies may be often observed—flattened on the superficial and deep aspects, circular in outline, the largest about one-fifth of an inch in diameter, the smallest mere grains. These bodies are freely movable on the deeper tissues and beneath the skin, and are arranged with a rough symmetry in the two limbs; if there be but one or two in a limb, the finger carried over the corresponding part of the opposite limb readily detects even the single specimen. When they are numerous, their symmetry is similar to that of cutaneous eruptions, not absolutely exact, but very nearly so. They occur in thin-skinned, pale bodies, and so can generally be seen before their detection by the hand. Dr. Bennett never saw them associated with varicose veins, or with skin-eruptions, or epheletic markings on the legs. They are most commonly seen in the limbs of the subjects in our dissecting-rooms; but he has seen them in the living also in hospital. They are not the seat of any trouble or pain, and pass unnoticed until attention is directed to them. He has never seen them in the

male. In his early examinations of them he had sought, but without success, for small veins, or varices, as their seat; and for lymphatic vessels passing into or connected to them. Last summer he obtained abundant specimens in one subject and a few from a second; and from these he obtained the following results from microscopic examination.

He made a thin section of the centre of one of the largest of the bodies dried. Adopting the ordinary process for hard brittle substances, he polished a flat surface on one face of a section made with a fine saw through the centre of the body, and cemented it to a glass slide with old Canada balsam; he then ground away the structure until he obtained a fine transparent section. In this process, he learned that the densest part of the structure was at the circumference—the most open and friable at the centre. Examined, after completing the mounting with fluid Damar varnish, the pattern of the thin circumferential part was clearly seen to be that of ordinary condensed connective tissue, forming a capsule for the body, calcified. In it the usual irregular lacunæ, dark by transmitted light, due to gaps in the structure, were readily seen; septa from the capsule passed irregularly through the structure, themselves calcified and showing lacunæ similar to the outer layer. The arrangement of these parts was such as every one familiar with the microscopic appearances of the compound tissues would recognise as that of the envelopes and septa of subcutaneous fat. In the intervals enclosed by these calcified envelopes and septa the mass of the structure appeared arranged strictly in the pattern of the fat-cells, the intercellular substance being calcified and breaking with a brittle glassy fracture. He next macerated a fresh specimen in a weak picric acid solution, to which a minute quantity of hydrochloric acid was added; and found that the earth-salts were deposited in the connective tissue forming the capsule and septa of a lobule of adipose tissue, and in the intercellular structure of the fat-cells. The decalcified tissue presents the pattern of ordinary fat, with only the exception that the structures out of which the earth salts have been dissolved are thicker than in the healthy tissue. The position of the calcified body in the fat-lobule is marginal, never central.

**DÉJÉRINE ON LESIONS OF THE ANTERIOR NERVE-ROOTS IN DIPHThERIC PARALYSIS.**—Dr. J. Déjerine describes (*Gazette Médicale*, No. 33, 1877) the result of the *post mortem* examination of three children who died of diphtheritic paralysis affecting the pharynx. In one, almost all the muscles of the body had been paralysed; in the other two, the muscles of the neck and inferior limbs were affected. The anterior nerve-roots were examined, after lying for twenty-four hours in a one-per-cent. solution of perosmic acid. In the case in which the paralysis had been most extensive, the author found in most of the nerve-fibres indications of advanced parenchymatous neuritis (degeneration). The axis-cylinders had disappeared, the medullary substance was split up or even replaced by drops of myelin, the nuclei of the neurilemma and of the interstitial connective tissue had undergone proliferation. Similar changes were observed in the peripheral nerves connected with the muscles; the muscles themselves appeared to be quite unaffected. Similar but less marked changes were found in the two cases in which the paralysis was neither so extensive as in the first, nor had lasted so long during life. The change in the nerves resembled that which they undergo



when deprived through any cause of the influence of their trophic centres; and the author thinks it probable that the change in the peripheral nerves is dependent on an intramedullary lesion. The examination of the spinal cord is reserved for a future occasion.

**BRISSAUD AND MONOD ON CONGENITAL TUMOURS OF THE SACRO-COCYGEAL REGION.**—In the *Progrès Médical* for 1877, Nos. 32 and 33, MM. Brissaud and Monod describe a tumour of the coccyx which was found in a child a week old. The mother, a woman aged 29, had previously borne two healthy children; she had not felt any disturbance during her pregnancy. The child was thin and of miserable appearance; the tumour, which was of the size of an orange, was attached to the lower part of the spinal column by a triangular ligament, in which the coccyx lay. It was covered by a thin red skin, and felt like a small flaccid sac. There was distinctly no connection between its interior and the spinal cord. On section, the skin was found to be inseparably united with the subsequent connective and adipose tissue. Within this lay a somewhat dense membrane, then a vascular medullary membrane, and inside all a large cyst. This was lined with ciliated epithelium, outside which was a layer of pale muscular fibres, closely united with the firmer tissue of the wall. This consisted internally of sarcomatous tissue, and of a firmer outer layer of a more fibrous substance; scattered through it were tough connective tissue fibres, and it contained insulated portions of cartilage, lamellæ of bone, and small cysts with partially calcified epithelial cells.

They also describe a tumour of the coccyx, which, having been at birth as large as a prune, became painful at about the fourth year, and grew with increasing rapidity from the month to the twenty-first year. It now formed an enormous pyriform appendage, reaching from the end of the coccyx to the popliteal space; it was joined to the coccyx by a pedicle about two inches broad, but was not intimately connected with the bone. The tumour consisted of—1, two large cysts, containing a thready, synovia-like fluid, and lined with flattened epithelium; 2, numerous small cysts, with ciliated epithelium; 3, a fibrous wall, with one large, and numerous small pieces of bone, periosteum, and cartilage.

**ISRAEL ON DUPLICATION OF THE LEFT HALF OF THE LOWER JAW.**—In a dissertation (Berlin, 1877) abstracted in the *Centralblatt für die Medicin. Wissenschaften* for January 5, Dr. O. Israel describes a case of duplication of the lower jaw in a new-born child, in whom the tragus of the left ear was also double. There was a projection as large as a goose's egg in the lower maxillary region, causing considerable disfigurement. The tumour, which was movable, consisted of a portion of lower jaw, containing five embryonic teeth and a distinct condyle, a rudimentary mouth, with indications of lips and tongue, and a confused mass of salivary gland-tissue, mixed with muscular and connective tissue, forming in one part a retention-cyst, while the secretion from the other parts of the gland-tissue escaped by a duct opening externally.

Was this a malformation, or a partially developed second fœtus? Dr. Israel decides in favour of the latter.

A. HENRY, M.D.

**RODGERS ON A CASE OF INCLUDED FŒTATION.**—Dr. W. E. Rodgers, of Memphis, Tennessee, states

in the *American Journal of Medical Sciences* that on June 8th, 1875, he performed lateral lithotomy on a boy for stone in the bladder. Having satisfied himself that the knife was well in the groove, he passed it on towards, and, as he thought, into the bladder and withdrew it. On introducing his finger to explore for the stone, he discovered that the knife had not entered the bladder. He readjusted the staff, and passed the knife into the bladder. A stone as large as a guinea-hen's egg was extracted without difficulty. On the second day after the operation the mother of the boy handed him a folded paper containing something that came from the cut. Upon examination Dr. Rodgers recognised the contents of the paper to be fetal bones—the lower half of both femora, two ribs, an ulna, half a radius, a complete scapula, and numerous particles of osseous *débris*. Several members of the profession visited the patient and explored the wound, and with the probe felt the bones in a sac situated between the prostate and perinæum. The patient complained of great pain during the examination. The bones continued to pass out through the wound, until Dr. Rodgers collected 14 perfect bones and 78 pieces of bone.

The condyles were perfectly formed, and the epiphyses were completely ossified and firmly joined to the shafts of the long bones.

#### RECENT PAPERS.

- Note on the Brains of Persons who have undergone Amputation. By Ch. Féré. (*Le Progrès Médical*, Jan. 19.)  
On Myelogenic Leukæmia. By Dr. E. Neumann. (*Berliner Klin. Wochenschrift*, Feb. 11.)  
Tuberculosis in its relations with Scrofula. By Dr. Thaon. (*Le Progrès Médical*, Jan. 12.)  
Thrombosis of one of the Coronary Arteries of the Heart. By Dr. A. Hammer. (*Wiener Medizin. Wochenschrift*, Feb. 2.)

#### MEDICINE.

**HEYMANN ON ABNORMALITIES OF THE SPINE, SIMULATING CHEST-DISEASE.**—In the *Berliner Klinische Wochenschrift*, Dec. 24, Dr. P. Heymann, of Vienna, describes two cases of spinal abnormality, simulating disorders of the cervical and upper thoracic viscera.

The first case is that of a well-made robust girl, aged 16. She complained of periodic attacks of dyspnoea, which usually occurred a few days after catching an ordinary cold, and gradually gave way again, after three to five days, on the setting in of an abundant thickish expectoration. The difficulty of breathing was greatest in the recumbent posture, and at night, and was accompanied by a feeling of obstruction of the throat, without, however, constriction and oppression of the chest, and by deep reddening and suffusion of the face. Cough and difficulty of swallowing were entirely absent. Examination with the laryngoscope revealed a rounded, hard, bony, and immovable prominence, projecting from the posterior pharyngeal wall, and occupying two-thirds of the pharynx. On moving the head forward or backward, this projection was slightly altered in form. The epiglottis appeared smoothed and flattened, and fitting to the anterior surface of the prominence. On examination from behind, the spinous process of the fourth cervical vertebra was indistinctly felt, and projected rather too much upwards, and above it was felt a considerable gap, bounded above by the spinous process of the axis. On bend-

ing the head backwards, the spinous process of the fourth vertebra disappeared, but became plainly prominent again on inclining the head forward, and then the gap was occupied by a tense band, apparently stretching between the spinous processes of the second and fourth cervical vertebræ. On inclining the head laterally, only one side appeared thus stretched. The head was readily reclined, but there was some difficulty of inclination. It appeared, therefore, that the arch of the third cervical vertebra was deficient, hence the body of the vertebra was thrown forward, causing a tilting backward of the spine, and the prominence described; while posteriorly the spinal canal was for the time obliterated. On the occurrence of a throat-catarrh, the mucous membrane covering this projection swelled, and pressed against the epiglottis, thus causing the dyspnœa, which was relieved by stretching the neck upwards and forwards, and so reducing the obstructing prominence. This defect of the third cervical arch was evidently congenital, the symptoms described having existed from earliest childhood. In the anatomical collection at Vienna there exist several specimens of similar abnormalities—for example, an atlas with the entire arch between the articular processes absent; complete fissure of the atlas; ankyloses between two or more cervical vertebræ, etc.

The second case was that of a gentleman aged 50, who for the last two years had suffered from difficulty of swallowing, amounting at times to utter impossibility; vomiting was never present. Examination with œsophageal bougies showed the existence of a variable obstruction below the cricoid cartilage, so that at one time the largest bougie could be introduced, while at another even the finest could not pass. When the obstruction was once overcome, all sizes of bougies were readily passed down to the stomach.

This coincided with the patient's statement that at times he could not swallow at all; but, if the food had once overcome the obstacle situated high up in the gullet, it readily passed onwards. We know that the normal relation of the cricoid cartilage to the spinal column is such that a certain amount of movement of the head is necessary when introducing the œsophageal sound.

In the patient the introduction of the bougie was yet much more dependent on the position of the head. This led to the conclusion that the obstruction to deglutition consisted of a lordosis (curvature with the convexity forward) of the cervical vertebræ. This was confirmed on undressing the patient. It was then found that there existed scoliosis (curvature with the convexity backward) of the upper dorsal and of the lumbar vertebræ, compensated by scoliosis and slight lordosis of the lower dorsal vertebræ, and lordosis of the lower cervical vertebræ, which occasioned the obstruction to deglutition. A paste-board cravat of about a hand's breadth was accordingly so adapted that, by stretching the neck upwards, the curvature was almost neutralised, enabling the patient to swallow without difficulty.

**BARDENHEWER ON BRONCHIECTASIS.**—Dr. Bardenhewer says (*Berliner Klinische Wochenschrift*, December 24, 1877) that, according to Gerhardt (*Deutsches Archiv für Klinische Medizin*, vol. xv) articular rheumatism may occur in connexion with suppurative diseases of mucous membranes, and in consequence of the absorption of, and blood-poisoning by, accumulated, stagnating, and decomposing

purulent effusions, as in bronchiectasis (bronchitis with dilated bronchi), diphtheria, gonorrhœa, pyæmia, dysentery, etc. In confirmation of this view, two cases were observed in the Cologne Hospital. Both were well marked cases of bronchiectasis, with abundant muco-purulent and very foetid expectoration, for which both were treated with inhalation of a solution of 2 per cent. of carbolic acid. While under this treatment, and improving with it, both were seized with rheumatic inflammation. In the first case there was a single attack of pain, and swelling of the left knee, which gave way to local application of ice. In the second case, three separate attacks occurred in both knees, presenting all the symptoms of acute articular rheumatism, and were relieved by the internal use of salicylic acid. Both cases ultimately recovered completely. Gerhardt strongly advocates mechanical compression of the thorax in the treatment of the bronchiectasis, as removing the stagnating purulent secretion, diminishing the concomitant fever, and also relieving the rheumatic symptoms. In place of this, the above two cases were treated by carbolic inhalation—the same treatment, indeed, having been steadily pursued for about three years in the Cologne Hospital in all cases of bronchiectasis. Cases of pneumonia, pleurisy, mechanical injuries of the respiratory organs, etc., may at different stages present expectoration of abundant, purulent, and foetid sputum. This sputum separates on standing into three distinct layers (Traube); the upper layer is greenish-yellow, opaque, and frothy; the middle serous, transparent, and albuminoid; the lower yellow, opaque, and consisting of pus and detritus. It further contains paste-like plugs of a dirty-yellowish colour, which are extremely foetid, and consist of finely granulated detritus, mixed with larger fat globules, in which are suspended occasionally (Virchow) acicular crystals of margaric acid. In presence of this kind of sputum, treatment has the double object of counteracting its putrescence and of reducing its excessive quantity. Arrest of the putrescence of the secretion accumulated in the bronchial tubes is generally followed by diminution of its quantity—since the putrid secretion itself acts as an irritant in causing its continuous production and decomposition, and also in maintaining the accompanying febrile state. The main indication, therefore, is the arrest of the putrefactive process. The experience of thirty cases within the last three years is, that this is best fulfilled by the inhalation of carbolic acid. For this purpose a solution of carbolic acid in water (1 or 2 per cent.) should be inhaled every two hours day and night for several weeks. The result has always been most favourable, even when, from the nature of the case, complete cure was out of the question; while in several instances, when strong evidence of cavities existed, this treatment led to a perfect restoration to health.

W. J. TREUTLER, M.B.

**SACHARJIN ON SYPHILITIC PNEUMONIA.**—Dr. Sacharjin (*Berliner Klinische Wochenschrift*, January 21) says everyone has heard of cases of phthisis cured by iodide of potassium and mercury, but of anatomical basis for the diagnosis of syphilitic pneumonia there has been lack. Syphilis often directly, or indirectly through the treatment, breaks people down in health, and phthisis supervenes. Such cases are usually not only not benefited by specific treatment, but the disease grows rapidly worse. But he has had the opportunity of seeing two cases not conforming to this type. The first case was seen fourteen



years ago. A well-built man, of healthy family, 30 years of age, six or seven years before had had syphilis, and, in the last three years, serpiginous eruptions and periostitis of the tibiae and ulnae. For the last few weeks he had suffered from pain and stuffing of the chest, great shortness and difficulty of breathing, and, in the last week, much cough and slight febrile disturbance. During the last year the patient had been liable to colds, which had generally taken the present form of feverish bronchitis, sharp, but of short duration. For the past few days he had been in bed; the fever had gone, but the cough remained. His present condition was meteorism, and tendency to constipation; no albumen nor sugar in urine; pulse rather rapid and feeble; much emaciation, no fever, restless sleep, low spirits. He had little cough, very little morning expectoration (which the patient, in spite of warning, forgot to keep), marked dyspnoea, and feeling of obstruction and pain in the chest. Both clavicles projected; above and below was marked depression of the chest-walls, with dulness of the percussion-note, especially on the right, down as far as the lower border of the second intercostal space; fremitus was less than normal, and, on auscultation, indeterminate breathing, tending towards bronchial (prolonged expiration), was heard. In the same places and elsewhere in the chest there were sibilant and moist râles. No other signs were heard in the thorax. The heart was normal. In the tibiae and ulnae were great pains, increased at night, and, on investigation, syphilitic periostitis was found. For a week he kept his bed, took no medicine, but regulated his diet; the cough and expectoration went, the râles disappeared, but the other physical signs remained. From the coincident phenomena, the lung-affection was diagnosed as syphilitic, and, as he had had very little mercury, that drug was prescribed. It was followed by intolerable itching, worse at night, and preventing sleep; scratching brought out a papular eruption, and the itching increased; where the patient could not scratch, there was no eruption. Baths and other remedies were useless; a lotion of perchloride of mercury alone gave any relief. The treatment therefore was, externally, the application of the above lotion for the itching and eruption, bearing in mind too the absorption of mercury, from the large extent of surface to which it was applied, and internally half a pint daily of Zittmann's decoction as a mild mercurial. The itching and eruption soon disappeared, and sleep returned. After four weeks of the treatment, the shortness of breath, pain, and obstruction of the chest disappeared. The hollows above and below the clavicles had filled up (the patient had gained flesh by better appetite and rest), while percussion, auscultation, and palpation could no longer detect the previous signs; the chest presented here, as everywhere else, the normal conditions. During the following eight years the patient was twice seen complaining of slight nervous and gastric disturbances, but, with the exception of two slight and passing attacks of bronchial catarrh, the chest remained healthy. The second case, observed six years, is the literal repetition of the first. The patient, 30 years of age, and of strong constitution, had had syphilis nine years; and, for the last five years, suffered from periostitis and ozæna, with necrosis of bone. At the commencement of his illness he took a little mercury, but had since been treated with iodide of potassium only, the influence of which had seemed feeble lately. For the last year the patient had suffered from nervous and dyspeptic symptoms, and febrile bronchial catarrh, which,

treated by keeping his room and quinine, disappeared. Shortly before being seen he had had one of these attacks, accompanied, however, by pain in the chest and shortness of breath, which had not previously occurred. When seen, he was free from fever, and the cough was nearly gone; he had no sputa, marked shortness of breath, etc., just in all points like the first. When the bronchitis had quite disappeared he was ordered mercurial inunction, which was done twenty-five times, five of ten grains, five of fifteen grains, and fifteen of twenty grains; the result was complete disappearance of the physical signs and symptoms.

Sacharjin considers that the clinical aspect of these cases sufficiently distinguishes them from phthisis, while their syphilitic nature is proved by the effects of treatment. They do not aid the anatomical question. He hopes others will publish their own experiences, so as to enable us to judge of the relative frequency of such cases. Dr. Flöroff has informed him of a case which he has observed with identical characters, which recovered under iodide of potassium, and is still healthy (four years afterwards). He thinks the following peculiarities distinguish syphilitic pneumonia from ordinary phthisis.

1. The specific history.
2. The patient's strong constitution. It is more probable that feeble subjects, with a tendency to phthisis, acquire that early, than that they live to acquire the later syphilitic affections, of which syphilitic pneumonia is certainly one.
3. The symptoms and physical organs.
4. The absence of hæmoptysis, cough, sputa, and râles.
5. No fever.
6. The different effect of mercury or iodide of potassium. In reference to this, it is mentioned that syphilitic pneumonia presents the same peculiarity as the other later syphilitic affections; it suffices to employ a very moderate quantity of mercury to cure the morbid appearances; the later syphilitic affections appear to require much less mercury than the earlier ones. It is possible that such cases may be at times complicated with inflammatory disturbances of the lungs or pleuræ, in which cases their typical aspect would be altered, and no conclusions for diagnosis, prognosis, or treatment, based upon lung-syphilis, would hold good. Further observations must show whether simple uncomplicated syphilitic lung-affection, curable by mercury or iodide of potassium, can assume a different appearance from the above.

**BUCHWALD ON ANEURISM OF THE PULMONARY ARTERY.**—Dr. Buchwald (*Deutsche Med. Wochenschrift*, January 5, 1878) relates a case of this rare condition met with in the clinic of Professor Biermer, of Breslau. The patient, a maidservant, aged 21, had been always healthy until the last year, during which she had suffered from slight cough, becoming worse in the winter; pain in the left side of the chest, increasing feebleness and cough, expectoration of purulent matter, and on one occasion of blood; night-sweats.

She was admitted into hospital on September 5, 1875. She was a thin, middle-sized blonde; the skin and mucous membranes were pale, with circumscribed circular red patches on the cheeks, such as one sees in phthisical subjects. Here and there on the skin were punctiform hæmorrhages. The thorax was small, long, with wide intercostal spaces; the two sides were unequal, the left side being very pro-

minent opposite the junction of the ribs with the cartilages from the second to the sixth; the patient said this had been so from her childhood. The heart's apex-beat could be seen extending over a centimetre in the fifth left interspace, internal to the nipple; but in the second left interspace was another pulsating area, three centimetres in breadth. This impulse, which was more of an undulation than a short pulsation, began at the sternal border, and extended to the left; to the right it could not be felt. During deep inspiration the phenomenon disappeared, but during ordinary breathing it was slight, and most marked of all when breathing was arrested. The pulsation could be felt from the second to the fifth interspaces, but was less visible, and free from thrill, in the fourth and fifth. Thrill began in the third interspace, reached its maximum in the second, and was lost in the first. It accompanied the systole, but could be followed in the diastole; with a deep inspiration it became indistinct; superficial breathing made it feebler; expiration strengthened both thrill and pulsation. Percussion showed extension of the heart's dullness to the right, and towards the second pulsating spot; there was dullness in the first interspace on the inner side of the parasternal line. In the second interspace the dullness commenced four centimetres outside the sternum, and extended downwards and outwards towards the axilla in a convex line to the position of the apex-beat. To the right, the dullness was followed over the sternum to 1.5 centimetres in the fourth interspace. The upper part of the sternum was not dull; below, the heart's dullness was lost in that of the liver. The lungs encroached upon the heart, so as to push the limits of cardiac dullness towards the middle line. At the apex there was a slight systolic murmur, which completely disappeared to the right; but upwards, and especially towards the second pulsating spot, it increased, and attained its maximum in the second interspace; here, indeed, systolic and diastolic periods could not be distinguished, only the strong intensifying of the sharp whistling murmur made the systole recognisable. In the supraclavicular and infraclavicular fossæ, the sharp murmur could be heard above the feeble breath sounds. In the left carotid, sounds were only accompanied by the strong murmur from the second interspace; in the right carotid, a feeble systolic blowing murmur was alone audible. The last was also to be heard in the aorta; the second sound was clear, not accentuated. In inspiration, the murmur was everywhere feebler, but did not disappear on the deepest effort. Hæmic murmurs were heard in the veins. The pulses were equal, full, regular, of low tension; rate from 92 to 128. In the lungs, there was dullness in the left infra-spinous and infraclavicular fossæ, without any infiltrated spot being detectable by auscultation; the latter showed only diffuse catarrh, which existed also in the right lung. Respiration was of the inspiratory type; the sputa were scanty, muco-purulent, only once blood-stained. The spleen-dullness was increased. The urine varied in quantity from 80 to 2,000 centimetres per diem, of corresponding specific gravity; no albumen. In the progress of the case albumen and casts appeared in the urine, and œdema began and gradually extended; some weeks afterwards she had a rigor, with a rise of temperature, which before had been normal. The pulmonary symptoms declined. In the heart, systolic and diastolic murmurs became audible in the aortic area. Nearly two months afterwards, a small abs-

cess formed in the left groin, which was opened. Signs of pericarditis, with effusion, supervened. The fundus of the eye was normal; the œdema was extreme; she had great catarrh of the lungs; the temperature was generally low. A few days later, petechiæ appeared in the skin, and collapse and death followed.

The *post mortem* examination showed pericardial effusion; enlargement of the heart, affecting chiefly the left side; an aneurism of the pulmonary artery, of the size of a hen's egg, communicating with the aorta by the persistence of the ductus arteriosus; polypoid excrescences on the wall of the duct and the pulmonary artery and aorta, also on the valves of the aortic, pulmonic, mitral, and tricuspid openings; brown induration of the lungs, with a periarterial abscess and infarct in the right lung; enlargement of the spleen; acute nephritis; hæmorrhage into the white substance of the anterior lobes of the brain, opening into the left lateral ventricle.

ROBERT SAUNDBY, M.B.

HILTY ON A CASE OF ACUTE HÆMORRHAGE OF THE PANCREAS.—Dr. Hilty describes (*Correspondenzblatt für Schweizer Aerzte*, Nov. 15, 1877) the case of a mechanic, aged 30, tall, stout, and muscular, and having the appearance of a drunkard. One evening he drank a large quantity of beer; in spite of this he passed a good night; but the following morning he was suddenly seized with a painful tension of the abdomen, which gradually increased, and general *malaise*. On admission to the hospital his extremities were cold, and his forehead covered with a cold sweat. He had an anxious expression, and was very restless; the sensorial functions were undisturbed; the pulse was small and quick, scarcely perceptible; the region of cardiac dullness was increased, but there was no murmur; respiration was quick and difficult; the lungs were normal. The upper part of the abdomen was distended and painful, especially on pressure. The pain and the obesity of the patient did not allow any peritoneal effusion to be discovered. He had had one evacuation in the morning; there was no vomiting, but constant nausea. The diagnosis was uncertain, but it was thought to be a case of acute gastritis, or of poisoning; poultices and tepid injections and wet wrapping was prescribed. Afterwards the stomach-pump was used; and a small quantity of yellowish watery fluid, giving an acid reaction, was removed. An emetic gave some relief. The night was quieter. Next day there was a spontaneous evacuation, but the general symptoms persisted, the pulse being thready, the extremities cold, and the temperature normal. As the patient writhed in bed, it was thought he had intestinal perforation. Opium was prescribed, and ice to the abdomen. There was a slight amelioration, but the symptoms returned, and the patient died delirious at 9 P.M.

At the necropsy, the epiploon and mesentery were found loaded with fat; there was no exudation into the abdomen, nor any trace of peritonitis. The stomach was large; the intestines, especially the ascending and transverse colon, were much distended. The diaphragm was pushed up as high as the fourth rib. In the connective tissue surrounding the pancreas, there was an abundant sanguineous infiltration. The organ itself was double its normal size, firm in consistence, and of a dark violet colour. On section, the lobules were seen to be of a dark colour, and from the interlobular connective tissue a large quantity of bloody serum escaped. In the



head of the gland especially there were numerous little extravasations of blood, varying in size from a millet-seed to a cherry-stone. In fact, the whole gland, acini and connective tissue, was infiltrated. Wirsung's duct was not dilated, but the vein running along the lower edge of the pancreas was distended with clots. The spleen and the kidneys were congested; the mucous membrane of the throat was somewhat thickened, and of a greyish colour. At the lower end of the œsophagus, and in the cardia, were some ecchymoses and superficial erosions. The liver was large and fatty. The heart was covered with fat, and its muscular tissue was soft and slightly degenerated. The brain was congested, and the fluid in the ventricles was cloudy.

This case is analogous to one described by Friedreich under the name of acute hæmorrhage of the pancreas. Zenker considers that the morbid appearances were not sufficient to account for death, which he assigns to the sudden and violent compression of the solar plexus by the fluid effused.

**ROBIN ON CEREBRAL COMMOTION AS A CAUSE OF TRANSIENT GLYCOSURIA.**—At the meeting of the Société de Biologie in Paris on December 1, 1877, M. Albert Robin, in support of the new theory advocated by M. Duret on cerebral commotion as a cause of passing glycosuria, reported a typical case. A young man, aged 19, having fallen from the seat of a carriage, was taken to the Beaujon Hospital. There were ecchymoses of the head, and he remained unconscious for many hours. As there was retention of urine, M. Robin performed catheterisation, and found that there was a notable quantity of sugar in the urine. A short time afterwards a second examination gave no traces of sugar. This is therefore a perfectly authentic case of temporary glycosuria, consecutive on cerebral commotion. M. Claude Bernard observed that this could be produced experimentally in animals. A. M. H.

**HIRSCHBERG ON THE APPEARANCE OF THE FUNDUS IN GENERAL ANÆMIA.**—Dr. Hirschberg read a very important paper at the Ophthalmological Congress in 1877 on the appearance of the fundus oculi in general anæmia, and on retinitis and atrophy, following loss of blood.

The author stated that E. von Jäger observed in his monograph on the ophthalmoscope, published in 1876, as well as in a separate communication in 1877, that it is very seldom that any change can be observed in the central vessels of the retina in anæmia. He also observed that it is true that it is very difficult to detect with the ophthalmoscope any changes in the fundus in anæmia; and this as the result both of clinical experience and of numerous experiments on dogs. Even when these animals were frequently bled until syncope supervened, the retina exhibited no characteristic appearances. Nevertheless, Dr. Hirschberg found that in man, in high degrees of anæmia, certain typical changes occur; but that these are not in such cases as come under the observation of the ophthalmic surgeon. These changes are of three kinds.

1. The papillæ of both eyes are pale, although the central vessels retain their normal size. Later the disc becomes of a shining white, as in atrophy. The bluish colour of atrophy, however, is not seen, neither is there abnormal sharpness of the disc; and vision in general remains unaltered, so long as there are no blood-spots or white exudations on the retina. The normal condition of the disc returns with conva-

lescence. This affection is observed both in pernicious anæmia and in ordinary anæmia from loss of blood.

2. In chronic anæmia, whether idiopathic or secondary, the disc becomes clouded with a whitish haze, and the central reflex streak in the arteries and veins appears indistinctly, both in the erect and in the inverted image. The blood-vessels become narrowed, and cannot be followed to any great distance towards the periphery. In the erect image, the disc is seen to be clouded in slender radiating streaks, and the vessels to be slightly veiled. As in the former class of cases, hæmorrhages and greyish exudation-spots occur on the retina. The indistinctness of the disc remains during a long time with very slight changes. These cases often terminate fatally.

3. A few days after exhausting hæmorrhage, neuritis occurs, and, without any appearance of swelling, the papilla becomes spread in various directions at its edge; there is considerable cloudiness of the retina, especially towards the periphery, and in the vicinity of the yellow spot, whilst on the whitish background numerous fresh red blood-spots are seen. There is considerable loss of vision, but it is not complained of by the apathetic patient, and in a few days absolute amaurosis supervenes.

B. THOMPSON LOWNE.

**DAL MONTE ON ASCITES FROM SYPHILITIC HYDRÆMIA.**—Dr. Carlo Dal Monte relates in the *Giornale Italiano delle Malattie Veneree e della Pelle* (1877) a case of ascites, the cause of which was for a long time supposed to be oligæmia, since a careful examination of the viscera excluded every other morbid process. His suspicions being excited by the appearance of a scar over the right elbow, Dr. Dal Monte decided on giving a course of mercury. Under this treatment there was a marked improvement in a few days, and in two months the patient—on whom paracentesis had been performed three times—was quite well. In confirmation of the diagnosis, the patient confessed that some years previously he had had an infective sore on his external genital organs. A. HENRY, M.D.

## RECENT PAPERS.

- On Incipient Forms of Spinal Disease and their Diagnosis. By Dr. F. de Ransé. (*Gazette Médicale de Paris*.)  
 The Value of Facial Asymmetry in the Diagnosis of Epilepsy. By M. J. Garel. (*Lyon Médical*, Jan. 13.)  
 Reflections on a Case of Sudden Death after Thoracentesis. By M. L. Bonveret. (*France Médicale*, Jan. 12.)  
 Case of Cancer of the Lung Consecutive on Cancer of the Pancreas; Consecutive Bronchial and Subclavicular Adenopathy. By M. Lereboullet. (*La France Médicale*, Jan. 9.)  
 On the Difficulty of Diagnosis in Pulmonary Tuberculosis. By M. Potain. (*Gazette des Hôpitaux*, Jan. 11.)  
 The Isolation of Patients in Hospital Wards. By Dr. J. V. Laborde. (*Bulletin de la Société de Médecine Publique*, Dec. 1877.)  
 School Hygiene. By M. E. Dally. (*Ibid.*)  
 Nephritis and Purulent Infection. By M. Nécasse. (*Revue Mensuelle de Médecine et de Chirurgie*, Jan. 10.)  
 Disturbances of Digestion in Diabetic Patients. By F. Guyon. (*Ibid.*)  
 Contribution to the Study of Metallo-Therapy in Hysteria. By Dr. Ch. de Kischer. (*Annales de la Société de Médecine de Gand*, Dec. 1877.)  
 On the Treatment of Hystero-Epilepsy by Hydrotherapy and Metallotherapy. By M. L. Grellety. (*Le Mouvement Médical*, Jan. 5.)  
 Pleuro-Pneumonia Causing a Pyo-Pneumo-Thorax; Thoracentesis; Cure after a Single Puncture. By Dr. Cerruti. (*Paris Médical*, Jan. 10.)  
 Multiple Abscesses of the Liver Consecutive on Dysentery. By Dr. Emile Demange. (*Revue Médicale*, Jan. 1.)  
 A Case of Hæmorrhage into the Cavity of Reizius (Perivisceral Hæmatocoele). By Dr. Dujardin-Beaumetz. (*L'Union Médicale*, Jan. 30.)  
 Changes in the Liver resembling Atrophic Cirrhosis in the symptoms presented by the Patient, but differing from it by the Anatomical Lesions and the signs furnished by examination of the Urine. By M. Hardy. (*Gazette des Hôpitaux*, Jan. 31.)  
 Capsular Phthisis. By Dr. A. Fabre. (*Archives Générales de Médecine*, Feb. 1878.)

- On the Treatment of Pleurisy. By Dr. P. Burreli. (*Lo Sperimentale*, Jan.)  
 On a Case of Progressive Pernicious Anæmia with Anchylostoma Duodenale. By Dr. C. Morelli. (*Ibid.*)  
 Mountain Fever and Malarious Waters. By Dr. C. Smart. (*American Journal of Medical Sciences*, Jan.)  
 Case of Membranous Entero-Colitis. By Dr. W. F. Muhlenberg. (*Ibid.*)  
 On Gout. By Dr. A. De Giovanni. (*Annali Universali di Med. e Chir.*, Jan.)  
 On Simulation of Fever. By Dr. Sellerbeck. (*Berliner Klin. Wochenschrift*, Jan. 21.)

## SURGERY.

PARONA ON DISEASES AND INJURIES OF BONE.—In an article entitled "Surgical Notes", published in the *Annali Universali di Medicina e Chirurgia* for November, Dr. Francesco Parona relates several cases of injury and disease of bone. Among fractures, first comes a case of broken leg in a man aged 57, whose limb was run over by the passage of the wheel of a hay-cart. Excoriation, but no laceration of the skin, existed; and great swelling of the limb, which in twelve days had disappeared. However, on the forty-fourth day the patient suddenly died. At the *post mortem* examination the fracture was firmly united by bony callus, in good position; but the veins of the part presented "traces of phlebitis by reddening and induration of the venous coats". In the pulmonary artery "grumous sanies was found; but unfortunately its extent, consistency, and structure were not noted." [This appears to be insufficient evidence in favour of embolic phlebitis, which the author, in supposing it the cause of death, assumes on the strength of a *post mortem* examination made by some one else.—*Rep.*]

Next comes a case of fracture of the leg in a man aged 30, ununited after five months. [As in the former case, no mention is made whether the tibia alone, or both bones were broken, though this is not of very great importance.—*Rep.*] The leg was put up in a chalk bandage, fenestrated at the fracture, which was held together by fibrous union. Tincture of iodine was injected with a Pravaz's syringe, five or six drops thrice, at intervals of a week. After each injection, moderate inflammatory reaction was set up, lasting two or three days. Perfect consolidation resulted in two months.

A third fracture occurred in a girl aged 14, subcutaneous at first, but becoming eventually compound through cutaneous ulceration. Sloughing and infiltration of the leg came on, and after three months union was uncommenced. By means of permanent extension he succeeded in effecting union of the bones and healing of the sinuses, with eventual complete recovery.

The fourth was a case of fracture of the neck of the femur in a woman aged 75. For about ten days a Liston's long splint was used, but left off on account of severe cough, which rendered it useless, and in its stead an immovable silicated bandage (the extent of which is not stated) was put on and retained for sixty days, after which the total absence of shortening or other deformity raised a suspicion of previous diagnostic error. However, a few months later the patient died of senile decay, and a *post mortem* examination was made, with the result of disclosing a transverse fracture of the neck of the bone, within the capsule of the hip-joint, completely healed by firm bony union, the line of which was evident, and is represented by the writer in a drawing. He justly repudiates the practice, recommended by authorities,

of assuming the non-union prognosis in such cases, and of withholding effective mechanical rest and immobility.

In a fifth case a boy, aged 14, was struck in the chest by a spent cannon-ball in its rebound, at artillery practice. Over the fourth, fifth, sixth, and seventh ribs, which were broken, a tumour (presumably blood) arose under the unwounded skin for a hand's area, on the right side. That side of the chest was immobilised and compressed with plasters; although there was pneumothorax and subcutaneous emphysema, with great previous mobility of the fragments, and severe accompanying pain, the treatment was most effectual, resulting in complete recovery and union after twenty-seven days.

The sixth was a case of fracture of the head of the humerus in a man aged 62, who fell from a height on his shoulder, and was well in a few months. During the convalescence, an osseous ridge was felt as a confirmatory sign of diagnosis.

He gives a few cases of amputation for severe compound fracture, and one for white-swelling of the knee-joint, in which last he saved a flap of periosteum. The patient died, and he was able to satisfy himself that not only did the periosteal flap live and become united to the end of the bone, closing up the medullary canal and marrow, but also had a few laminae of bone developed inside it, as microscopic examination proved.

Then follows a case of resection of the whole shaft of the tibia in a boy of 11 for necrosis, following suppurative periostitis of non-traumatic origin, occurring some months after a fracture of the forearm, which had perfectly united in a month. There was reproduction of the tibia, and restoration of the limb to usefulness.

RUSHTON PARKER.

TIRIFANY ON THE TREATMENT OF STRANGULATED HERNIA.—Dr. Tirifany (*Compte rendu de l'Académie Royale de la Belgique*, tome XI), studies the treatment of strangulated hernia. His conclusions are as follows. 1. It is impossible in the present state of science, to limit in an absolute manner, in practice, the respective domains of taxis and of herniotomy. 2. The taxis should be brought into operation before any other plan of reduction. 3. Methodic taxis should be continued, gentle and persistent, or prolonged and progressive. 4. To be efficacious, the taxis should act on the border of the sac of strangulated hernia, so as to cause the parts which have been last extended to be the first returned. 5. Methodic taxis ought to get the better of simple strangulated hernia. 6. Strangulated hernia, presenting serious complications before taxis, or becoming thus aggravated notwithstanding or under the influence of the operation, belongs to the domain of other reductive measures. 7. Certain normal anatomical or pathological dispositions, in the vicinity of strangulated hernia, make the use of the bistoury justifiable in these cases, even from the commencement of the strangulation.

WHITTLE ON TRACHEOTOMY IN CROUP.—Dr. Glynn Whittle has an article on this subject in the *Dublin Journal of Medical Science* for October 1877. Briefly stated, the author of this paper urges very strongly more frequent interference by operation in croup and the allied affections than is generally practised. It does not appear, however, on his own showing, that he has made his position very secure in so doing. Indeed, it might be suggested that, however desirable it may be that his conclusions should be adopted,



nevertheless, the quotations he makes from various authors tending to an opposite deduction are not greatly outweighed by anything he adduces in their favour. There is much to interest the reader, however, in this thesis, some points of which we will now notice.

The first successful operation was performed in 1782 by a London surgeon, John Andree. In 1818 and 1820 it was performed unsuccessfully, and in 1825 successfully by Bretonneau. Shortly after this, the operation succeeded in the hands of Trousseau for the first time.

The earliest statistics, published in 1839, show 28 recoveries in 140 operations. In 1858, of 410 cases operated on, 141 were saved. On the other hand, of 49 cases operated on up to the year 1849 in the Hospital for Sick Children in Paris, only one recovered. From that date to 1862 there were 991 cases operated on, with 233 recoveries, and during the same interval tracheotomy was required in 1,261 cases in the Eugénie Hospital, of which 229 lived. Professor Roser's statistics show 40 per cent. of recoveries after operation. This surgeon urges early tracheotomy before asphyxia sets in. Out of 103 cases operated on by Spence 34 lived, and in Buchanan's hands 17 recovered out of 46 operations. Here, then, we see the highest proportion of recoveries to be 40 per cent., the lowest 2 per cent. Between these we find 20, 34.4, 23.7, 18, and 33 per cent. of recoveries.

The author alludes to the difference of classification of croup by different writers, stating that tracheotomy may be required for any of the affections usually described under that general term except laryngismus stridulus, and that mild affection sometimes occurring at the outset of the exanthemata, and usually subsiding when the rash appears. The affections usually grouped under the heading croup are, he says : 1. Laryngismus Stridulus ; 2. Angina Stridula, or Stridulous Laryngitis ; 3. Cynanche Trachealis, or True Croup ; 4. Diphtheria, or Pseudomembranous pharyngo-laryngitis. 5. Spasmodic Croup from irritation of ulcers of the larynx ; 6. Mechanical Croup from Œdema of Glottis.

1. Laryngismus he excludes from operation, because he regards it as a purely nervous affection, the spasm being due either to some "central" or "reflex" irritation, and likely either to kill the patient or to subside before even the preliminaries of the operation could be arranged.

2. Angina Stridula, "that variety of croup which may be most successfully treated by tracheotomy," he describes as "inflammation of the mucous membrane of the larynx and trachea, without the formation of false membrane, but giving rise by *direct reflex* action to spasm of the glottis. It begins with slight hoarseness and cough, which attracts little attention at first. This may last for two or three days, or even for a week, being temporarily relieved by hot drinks or simple cough-medicine. By-and-by feverish symptoms set in ; the breathing is quick and sibilous—not as loud, however, as in cynanche trachealis ; the cough is sharp and barking, and more frequent than in true croup. In this stage of the disease relief may be obtained by moderate purging, emetics, hot bath, and inhalation of steam. But if no relief follows this treatment, the breathing becomes after some hours more distinctly crowing ; the child almost becomes convulsed, throwing back its head and stretching out its hands in the struggle for breath : the pulse is quick, and the patient perspires copiously. If the operation is now postponed,

the well marked symptoms of asphyxia will soon supervene—dilated nostrils, blueness of lips, lividity of face, flickering pulse, with semi-insensibility."

Bretonneau appears to regard angina stridula as rather an unimportant disease, never having had a fatal case of it, but describing several which terminated favourably. He does not, however, draw a clear line between it and laryngismus stridulus. He describes, however, two deaths from what he calls "tracheitis," which the author supposes to have been angina stridula. Trousseau's description of stridulous laryngitis is much the same as the author's, except that the latter believes the attacks to occur by day as well as night. He mentions that the paroxysms do not occur two or three times in the space of a few minutes, but are separated by long intervals, during which the patient breathes easily. Trousseau, however, states that this disease is liable to extraordinary exacerbations and remissions, which the author does not regard as characteristics of the affection in this country. Trousseau has failed in such cases to detect the slightest trace of false membrane even on the minutest inspection. And although the mucous membrane of tonsils and pharynx may be red and inflamed, there is no swelling of the cervical or sub-maxillary lymphatic glands. The author entirely disagrees with Trousseau that there is little in the nature of this disease of a serious character, and believes that a child with symptoms such as he describes could only be relieved by tracheotomy. Trousseau admits that stridulous laryngitis may be fatal, but says that such a termination is exceedingly rare. Niemeyer, too, is of the same opinion. Like Trousseau, he represents the attacks as almost exclusively nocturnal, the children playing about gaily in the intervening days, quite well, but for a slight cough.

Sir Thomas Watson, on the other hand, regards this disease as more serious than the two last authors. He says we must judge of the existence of infantile laryngitis by the symptoms collectively, rather than by any particular pathognomonic sign. He does not, like Trousseau, describe the attacks as coming on almost exclusively during sleep, or as occurring very suddenly.

The author suggests that the reason why continental writers describe this disease as a trivial complaint may be found in the fact of the climate being drier there than in England ; and also that perhaps severer cases have been set down as cynanche trachealis.

3. True croup or cynanche trachealis is characterised, according to the writer, by false membrane, the suddenness of the attack, and the latter coming on at night. The cough is not loud, but hoarse and muffled, unlike that in angina stridula, which is sharp, barking, and frequent. The dyspnoea is an early symptom, and simultaneously there is produced a laryngo-tracheal whistling accompanying each inspiration, but less loud with expiration. Angina stridula is distinguished from this true croup, by the occasional barking cough and hoarseness existing for some days before acute symptoms supervene, and by the feverish symptoms being insidious up to this point.

4. Diphtheria "differs from those varieties of croup just described by the fever being asthenic from the first, by the shivering at the outset, followed by fever and moderate sore throat, accompanied by soreness in the front of the neck, and swelling of the sub-maxillary glands. The pharynx is red, the

tonsils swollen, little white patches are observed on the latter, the palate, or uvula."

Among the varieties of laryngeal disease which have been included under the generic name of croup, are also (5) spasmodic croup, the irritation of ulcers producing spasm of the glottis; and (6) mechanical croup, generally caused by œdema of the glottis. There is also the croupy breathing produced by aneurism or tumours pressing on the recurrent nerve.

The author concludes by recommending tracheotomy in cynanche trachealis, when medical treatment has had a fair trial, and when dyspnœa is threatened. He makes an exception in the case of phthisical patients and those suffering from pneumonia, also where the asphyxia has proceeded very far, and the plastic exudation has reached the bronchi.

In angina stridula, on the contrary, he "would operate to the patient's last gasp," as there is no false membrane, the local inflammation and spasm constituting the chief danger, but would prefer doing so before the symptoms of asphyxia were well marked.

In croup from diphtheria, tracheotomy should be performed in the second stage, although it may be followed by temporary benefit in the third. In this disease the system is so saturated with the specific poison as to render the operation almost hopeless.

In the other varieties this operation may be also required. In young infants under two years old, the author does not recommend tracheotomy.

ARTHUR E. BARKER.

#### KRÖNLEIN ON DIPHTHERIA AND TRACHEOTOMY.

—In an article in the *Archiv für Klinische Chirurgie*, Band xxi, Dr. Krönlein gives a statistical report of 567 cases of diphtheria, which came under the care of Professor von Langenbeck, from January 1, 1870, to July 31, 1876. Of the 567 cases, 539 were brought to the hospital with the malady, while 28 contracted it there, while under treatment for other diseases.

Of the 567 patients, 377 (or 66.4 per cent.) died, while 190 (or 33.6 per cent.) recovered. The number of cases of diphtheria steadily increased with each succeeding year, while the rate of mortality constantly decreased, with slight variations. In 1869, the mortality in 72 cases of diphtheria was 86.1 per cent. The reason for this fact is not understood.

Only eight cases occurred in patients between 18 and 41 years; the largest number (102 or 18.3 per cent.) being found among children three or four years of age. Irrespective of the performance of tracheotomy or otherwise, it appears that, as a general rule, the younger the patient the more favourable is the prognosis. The proportion of recoveries increased steadily up to between the seventh and eighth years, and then remained the same to the end of childhood. The death-rate in the first year was 89.4 per cent., in the eighth year 44 per cent., of the cases at these ages respectively.

Tracheotomy was performed in all cases of laryngeal stenosis, regardless of age or of pulmonary complications. The operation was performed 504 times; of these, 357 (70.8 per cent.) died; 85 of those operated upon were infants under two years, 11 of whom recovered, the youngest being seven months of age. In the cases operated on death generally occurred on the first or second day; the deaths after the fifth day were few.

The occurrence of 28 cases of diphtheria in pa-

tients under treatment for other surgical diseases at the clinique, with a mortality of 18 (or 64.2 per cent.) shows that the collection of large numbers of diphtheritic patients in the wards of a hospital during many years, has an injurious effect upon the salubrity of the institution.

Dr. Krönlein also gives other particulars regarding 241 of the cases of diphtheria, of which he possessed complete records. In 46 cases there were no deposits upon it and ulceration of the nasal fossæ and pharynx; on all of these, tracheotomy was performed, because of great tracheal stenosis. Of the remaining 195 cases, 31 exhibited no impediment to respiration, and consequently were not operated upon. The mortality among those operated upon was 73.7 per cent.; while of those not tracheotomised, but 32.2 per cent. died.

In those cases where the respiration was not perfectly free after the operation, the mortality was 25.2 per cent. greater than where it was; the course of those cases where large masses of false membrane were expelled, was very unfavourable. Twenty-two of the children were brought to the clinique in a state of advanced asphyxia; they were operated upon without anæsthetics; two recovered.

In 66 cases the cannula was removed between the third and seventeenth days; in one case (owing to granulations) not until six months. Of these 67 cases, 16 (23.8 per cent.) subsequently died: collapse one, diphtheritic nephritis one, pneumonia two, exhaustion, due partially to difficult deglutition, 12.

Obstruction of deglutition was observed in 42 cases between the first and forty-fourth days; it had no relation to the operation; the mortality of this class was 61.3 per cent.

Diphtheritic exudation on the wound after tracheotomy was recorded in fifty cases out of 210, of which 28 died; beside this, a peculiar exanthem was occasionally noticed in the neighbourhood of the incisions, and on the breast, back, neck, and upper limbs; albuminuria also was frequently observed.

Tracheotomy (except in the asphyxiated cases) was performed while the patients were thoroughly anæsthetised with chloroform.

After various medicaments had proved unsatisfactory, the treatment adopted since May 1874, has been the local application of chlorine water pencilled upon the affected portions of the pharynx every hour or two; a few drops of chlorine water diluted with three parts of water, were introduced into the cannula. Diphtheritic abscesses and suppuration of the submaxillary lymphatic glands occurred five times in 241 cases, and in one case suppurative mediastinitis. A microscopic examination of the pus showed micrococci in abundance.

#### SERKOWSKI ON TRACHEOTOMY IN TUBERCULOSIS OF THE LARYNX.

—Tuberculosis of the larynx is generally not mentioned in text-books as one of the indications for tracheotomy, as the operation is usually regarded as only a possible means for prolonging life for a short period. Dr. Serkowski, however, is of a different opinion (*Przegląd lekarski* No. 13, 1877, and *Allgemeine Med.-Chir. Zeitung*, August 15). He has performed tracheotomy twice for tuberculosis of the larynx. One of the patients on whom the operation was performed seven years ago is still alive; the other died at the end of three years, and *post mortem* examination showed far advanced phthisis. The one still living was attacked after a journey with severe dyspnœa, on account of which Dr. Serkowski at once performed tracheotomy



After the introduction of the cannula the respiration became free, and his patient fell into a sleep which continued for forty-eight hours. Under general treatment her strength was regained and her cough left her; but she continued to wear the cannula for two years, until laryngoscopic examination showed that a thickening of the vocal cords was all that remained of the former morbid condition. Two years later, there was still marked dulness on percussion over the apex of the right lung. Since that time Dr. Serkowski has never examined her, but he has often seen her in an apparently well-nourished condition. He expresses the opinion that the opening in the trachea was not only of temporary benefit, but prevented the further development of tuberculosis. He considers it necessary that the opening of the glottis should be sufficiently large, as thus only can the expectoration of purulent secretion from the lungs, and the admission of air to these organs, be secured. He therefore believes tracheotomy to be indicated in all contractions of the larynx, particularly in tubercular patients. The operation is absolutely required when the larynx is more affected with tuberculosis than the lungs.

**GIES ON PARENCHYMATOUS INJECTION OF ACETIC ACID IN CARCINOMA.**—Dr. Th. Gies relates (*Deutsche Zeitschrift für Chirurgie*, Band viii; and *Wiener Medizin. Wochenschrift*, No. 41, 1877) the case of a man aged 62, who had a glandular swelling under the horizontal ramus of the lower jaw. As a small nodule in the lower lip had been removed some years previously, the swelling was supposed to be carcinomatous; and this diagnosis was confirmed by microscopic examination after its extirpation.

Soon afterwards the patient felt pain in the tongue, which was found to be due to a cancerous ulcer in the left half of the organ, near the epiglottis. This diseased portion was excised after ligation of the lingual artery and division of the lower jaw; and no return of the disease in the part took place during eighteen months.

Seven months after the last operation, two new tumours appeared; a smaller one near the left border of the lower jaw, and a larger one lower down on the neck. The latter disappeared under treatment with ice; the former remained stationary. A year after the tongue had been extirpated, a rapidly growing tumour appeared in the neighbourhood of the right submaxillary gland; it resisted treatment by ice, and soon pushed the trachea aside. Examination of a small piece of the tumour, removed by the harpoon, proved it to be carcinomatous.

The author then injected into the tumour, once every week, the contents of a Pravaz's syringe filled with a solution of one part of glacial acetic acid in three parts of water. On the first day, a solution of 1 part in 9 was used. On each occasion, the point of the syringe was moved about in the growth, so as to distribute the contents. Warm poultices were applied. Great swelling followed. On the tenth day he made a deep incision with a pointed knife, and inserted a drainage-tube, through which offensive ichorous matter escaped. After seventeen days this discharge ceased, and at the end of four months only a hard nodule as large as a hazel-nut could be felt, lying deeply in the tissue. Soon afterwards four injections were made into the tumour near the margin of the lower jaw, and into one which recently appeared in the left cheek, with a similar result. A new swelling now appeared below the left ear; it increased to the size of a hen's egg, was very

hard, and microscopic examination showed it to have a more abundant framework of connective tissue than the former tumours. Injections were again resorted to, but, considering the greater resistance of this growth, the author injected two or three syringefuls daily. During eleven days, twenty-five syringes filled with the solution of acetic acid (1 to 3) were injected. The injections in the soft growths were almost painless, while the injections into this tumour produced great pain. On the twelfth day an incision was made. The suppuration lasted three weeks, at the end of which time the tumour had almost disappeared.

A similar result was obtained by the author in the case of a woman who had a soft cancerous tumour in the breast. During ten days a syringeful was injected daily, and on the eleventh day an incision was made. After fifteen days the ichorous suppuration had ceased, and at the end of four weeks only a small painless tumour about the size of a hazel-nut remained in the depth of the breast.

In both these cases, the author made the injections for the purpose of producing suppuration. For that reason, he used concentrated solutions of acetic acid.

He recommends attention to this method, because it may be very useful in cases not amenable to operation, as a means of restraining the rapid growth of the neoplasm, and possibly of producing radical cure. The cases, however, are of too recent a date to enable a definite opinion to be formed.

**LAPPONI ON SUBCORACOID DISLOCATION OF THE HUMERUS BY MUSCULAR CONTRACTION.**—Dr. G. Lapponi relates, in the *Rivista Clinica de Bologna*, Jan. 10, 1877, the following case.

The subject was a girl aged 15, who had some years previously suffered from chronic inflammation of the right radio-carpal articulation, and afterwards from some not well-defined inflammation of the shoulder-joint of the same side, as well as scrofulous ulcers of one leg. Of these affections she no longer presented any traces; her body was well developed, especially in the bony parts.

One morning in August, soon after rising from bed, she was sitting near an article of furniture about 3½ feet high, on which she rested her right arm horizontally, with the elbow bent and the hand hanging over the edge. She sneezed violently twice; and, without having made any other movement, she was seized with severe pain in the right shoulder-joint; at the same time, her arm was raised from the surface on which it was lying, and then fell useless. There was no numbness of the hand or arm; motor power remained intact in the fingers, but all attempts to move the upper part of the arm produced much pain.

On examination, the head of the humerus was found lying beneath the coracoid process. Reduction was effected by making extension on the forearm and rotating the limb outwards, while the head of the humerus was guided by manipulation into the glenoid cavity.

Dr. Lapponi supposes that the dislocation was due to an exaggerated action of the great pectoral muscle; and that the contraction of the deltoid, when the arm was observed to be raised, completed the displacement.

A. HENRY, M.D.

**VALTAT ON MUSCULAR ATROPHY CONSEQUENT ON DISEASES OF JOINTS.**—Dr. E. Valtat, after a great number of clinical observations and experi-

ments on animals, draws the following conclusions. In the majority of diseases of the articulations, the nutrition of the muscular system is affected. From the commencement of most of the varieties of arthritis a considerable atrophy is observed, and a more or less marked paralysis of the muscles destined to the affected joint. This atrophy cannot be attributed to functional inactivity, nor to inflammation of the muscles, of the nerves, or of the spinal cord. Most probably it is produced by reflex action. It is very important as a functional disorder; it increases generally as long as the disease of the joint lasts; and while sometimes it is only temporary, in the great majority of cases it persists after the cure of the arthritis, and it remains then as the sole obstacle to the re-establishment of motion. It has but slight tendency to spontaneous cure. Sometimes the muscles, under the influence of exercise alone, may recover their strength and size; but this happy termination is rare, always slow, and generally incomplete. The atrophic lesions are rapidly and easily cured by the employment of weak and permanent constant currents, such as M. Le Fort has described, or, still better, by the combined use of these and faradisation. A. M. H.

**MIREUR ON THE NON-INOCULABILITY OF THE SEMEN IN SYPHILIS.**—Dr. Mireur, of Marseilles (*Annales de Dermatologie et de Syphilographie*, No. 6, Tome viii, 1877) gives an account of his researches on the above subject.

A syphilitic patient, aged 26, with characteristic indurated cicatrix of primary sore, multiple adenitis, papular roseola, mucous patches of mouth and anus, etc., and who had not undergone any specific treatment, consented to supply the material for inoculation. The semen obtained from this man was immediately inoculated on four healthy persons quite free from syphilitic antecedents. All the instruments used were new, and perfectly clean.

The first two subjects were inoculated by three punctures made on each arm with a needle. On the third patient, a small blister was raised by means of ammonia on the right leg. Charpie dipped in the semen was then applied to the denuded dermis, and carefully kept in place for twenty-four hours. In the fourth case the epidermis at the upper and outer part of the left arm was removed by scraping, and three small transverse incisions were then made. Charpie thoroughly soaked in the seminal fluid was kept in contact with the wound for thirty-six hours.

The results of Dr. Mireur's experiments were the following. In the first two cases the punctures gave rise, a few hours afterwards, to slight local inflammation; but next day all inflammatory action had disappeared, and only a small ecchymotic and scarcely appreciable mark at the site of each puncture was left. All traces disappeared about the fifteenth or sixteenth day. In the other two cases there were not even signs of local irritation, and the wounds rapidly healed. All four persons were minutely and regularly examined every day for more than six weeks, and were kept under attentive observation for about six months. During this time not the slightest sign of syphilis, either local or constitutional, appeared in any of them. Two of the patients who were examined again, about a year after inoculation, confirmed, by their good state of health, the absolutely negative result of the experiment.

ARTHUR COOPER.

**LÉTIÉVANT ON EXCISION OF THE SUPERIOR MAXILLARY BONE.**—M. Létievant (*Lyon Medical*, September 16 and 26, 1877; and *Glasgow Medical Journal*) gives details of a case of very large fibrous nasal polypus, for which he excised the upper jaw. The patient was a young adult, and the tumour protruded into the pharynx, filled up the antrum, and had caused absorption of the hard palate. The operation was one of great difficulty, the bleeding being very profuse, and the danger of asphyxia great. At one time, M. Létievant says, he was doubtful if he should be able to complete his operation; "but, thinking of a new instrument, the *pincés à résection* of Farabœuf, I applied it to the tumour, and making by its aid a violent effort, tore out, at length, *en bloc*, the whole morbid mass, together with the osseous plates to which it was attached". The patient made a good recovery, healing taking place with the rapidity usually noticed in this operation. While the case thus detailed is in itself instructive, the chief interest of the paper lies in the modifications which the surgeon put in practice in the resection of the bone, and which he offers for the acceptance of surgeons. His aim has been,—1st, the conservation of the infra-orbital nerve; and 2nd, the preservation of three spicules of bones intended to form a sort of tripod for the support of the cheek. He accomplishes the first of these ends by cutting out a triangular portion of the bone, just over the infra-orbital canal, by means of a mallet and chisel; the rest of the canal he lays open with bone-forceps, and then lifts the nerve out of its resting place, and keeps it lying on the deep surface of the flap. The three processes of bone he obtains in the following manner. 1. On the inner lip of the notch made in the separation of the infra-orbital nerve he cuts, by means of forceps, an osseous slip, consisting of the orbital border of the bone and its connection with the nasal process, which latter he also separates from the body of the jaw. 2. On the outer lip of the same notch he cuts a second osseous band, which consists of the malar portion of the orbital border and its continuation into the body of the malar bone; then he cuts the malar away from the maxilla. 3. The gum and mucous membrane is scraped from the vault of the palate and alveolar process on the diseased side, and with the cutting forceps or chisel a section is made commencing behind the lateral incisor tooth, running into the anterior palatine canal (taking, indeed, the line of separation of the premaxilla and maxilla proper); from thence it is carried directly backwards in the middle line, so as to sunder the two palate processes as far as the affected border of the soft palate. M. Létievant quotes Longuet in proof of the loss of the muscular power which results from section of the sensory nerves of the face, and draws the following conclusion. "It is then evident that it is not enough to save the facial nerve in order to preserve to the facial muscles their muscular irritability after the operation of resection of the superior maxilla, but that it is necessary to preserve also the infra-orbital nerve. The preservation of this moreover, while it retains the motor power, retains also the sensibility, which is a point not to be disregarded."

**MACLEOD ON THE FLEXION CURE OF POPLITEAL ANEURISM.**—At a recent meeting of the Glasgow Society (*Glasgow Medical Journal*, January 1878), Dr. Macleod described two cases of popliteal aneurism of an unusual character.

In one he found no fewer than seven aneurisms.



He offered to ligature for the popliteal aneurism, but the man would not submit. He returned in a sinking state, and with the aneurism burst. At the man's urgent request, his leg was amputated, and he made a good recovery, and now all the other aneurisms disappeared. The second case was that of a ship-captain, who, while at sea, produced a popliteal aneurism by slipping on the deck. There was great pain, and he found relief by sitting with his knee strongly flexed. After continuing so for several days, with the aid of his wife, he found that pulsation had disappeared, and when he was seen by Dr. Macleod there was nothing but a hard lump.

**DURET ON THE TREATMENT OF SYPHILITIC LARYNGITIS.**—M. H. Duret (*L'Année Médicale*, No. 10, 1877), in the course of a review of M. Isambert's work on syphilitic laryngitis, suggests the following methods of treatment. The general treatment should consist in protiodide of mercury in pills ( $\frac{1}{4}$  to  $\frac{1}{2}$  grain three times a day), or bichloride in solution. Should the affection have passed the secondary stage, iodide of potassium may be employed, or in stubborn cases, the "mixed treatment". Tonics, iron, quinine, etc., are usually called for. The patient should carefully avoid catching cold, and should avoid the use of tobacco and alcoholic liquors. Complete repose on the part of the organ itself is absolutely essential. The local treatment is of great importance. In the early stages, when there is only congestion or superficial ulceration, it should consist of insufflations of powdered tannin, alum, nitrate of silver, or, better still, spray of carbolic acid solution, or solutions of alum, acetic acid, sulphate of zinc, etc. When the laryngoscope shows ulceration, the local treatment should be more precise and energetic. Cauterisation at the seat of ulceration may be practised, by means of a small sponge moistened with tincture of iodine, solution of nitrate of silver, or of sulphate of copper, 1 to 30; of alum, 2 to 30; of sulphate of zinc, 1 to 100. These substances are preferably to be dissolved in pure glycerine. The crayon of nitrate of silver or sulphate of copper may also be employed. Experience has shown that excessive inflammation and œdema of the glottis are not to be feared with this treatment. M. Isambert has obtained excellent results in obstinate cases by the use of chromic acid (1 to 8 and 1 to 5), which modifies the pathological tissues advantageously. When necrosis of the cartilages sets in, a practised surgeon may sometimes succeed in preventing extension of the injury by cauterising the diseased points by means of the galvanic cautery. Dr. V. Masson, in his thesis (Paris, 1875), has given the indications for tracheotomy with great exactitude. The surgeon may be called upon to perform this operation on account of asphyxia from œdema of the glottis, gummy tumour, or vegetations obliterating the air-passages, abscess, inflammatory swelling, or obstruction by loosened portions of necrosed cartilage.

When asphyxia comes on progressively, Isambert recommends cauterisations by chromic acid (1 to 3), thus crisping the swollen tissues, giving access to the air, and sometimes influencing the disease favourably at the same time. He reports two cases cured in this way. The patient must, however, be carefully watched, and if relief be not gained it will be necessary to operate. When the progress of asphyxia is sudden, tracheotomy is to be performed at once, even when the patient is *in extremis*. M. Trélat reports seventy-six recoveries in one hundred cases of

tracheotomy, in œdema of the glottis from syphilitic laryngitis.

**GOULEY ON MANAGEMENT OF THE URETHRA AFTER AMPUTATION OF THE PENIS.**—Dr. Gouley (*Louisville Medical News*, September 15, 1877) says that in May last a patient came under his care who had undergone amputation of the penis for cancer a year before. There was great narrowing of the cicatricial end of the urethra, and a small fistulous opening in the centre of the perinæum. He made an incision three inches in length through the perineal integument, laid open the urethra for an inch and a quarter, and applied a number of sutures so as to attach the cut edges of the urethra to those of the skin. The urethral incision extended back to the middle of the bulbous portion. There was but little bleeding. The anterior extremity of the urethra was found strictured for an inch or more. "The opening resulting from the operation resembled a small vulva." In a second case amputation was performed close to the pubes, and the urethra was managed as in the previous operation. The crura and urethra were previously secured by transfixion with needles. The urethra was then laid open in the perinæum on a grooved staff, and its edges sewed to the skin. The perineal wound did well, but the stump, which had been sewed up, suppurated and was never completely healed. Some infiltration of urine followed, and an abscess formed which had to be opened. To prevent this accident from happening in future, he proposes to detach the end of the urethra from the cavernous bodies, and to stitch its free extremity to the upper commissure of the perineal wound.

Wedemeyer (*Archiv der Heilkunde*, Heft vi, 1877) detached the urethra from the stump of the penis, and pulled it through a hole in the perinæum, made for the purpose. He thus describes his operation. The diseased part having been amputated, the wound was continued along the raphe of the scrotum to the perinæum, and the testicles separated. The urethra was then dissected out, and an incision made in the perinæum, between the posterior angle of the wound on the anus, about four centimetres in front of the latter. The urethra was passed through this aperture and its edges sewed to the margin of the skin. This separated the urethra entirely from the scrotal wound, which is then sewed up. In the case operated upon in this way, Wedemeyer had no difficulty with the urine, and the patient was able to urinate in the erect posture by lifting up the scrotum, without soiling his clothing. The advantage of having the urethra to open upon a flat surface rather than at the angle of the scrotum is obvious.

**BÉRENGER-FÉRAUD ON DILATATION OF THE URETHRA BY THE URINE.**—In an article in the *Lyons Medical* for October 7, 1877, M. Bérenger-Féraud remarks that, towards the end of the last century, Brunninghausen recommended this method of dilatation, which he alleged to be more easy and simple than that by bougies. To practise it, the patient must simply compress lightly the urethra behind the glans with his fingers, whenever he wishes to urinate. The pressure must be such that the urine can only escape slowly and after having remained some time in the canal; as a necessary result, the canal will be more or less dilated through its entire length, in the constricted as well as in the healthy portion. If this be repeated every time the urine is voided, the same effect will gradually be produced as if bougies had been used, while, at the

same time, the inconveniences of the latter are avoided. M. Bérenger-Féraud has employed this method in his practice, and the following are his conclusions with regard to it.

1. Dilatation of the urethra by the urine, repeated at each urination for a long time after a prolonged attack of gonorrhœa, seems to prevent the formation of stricture.

2. In cases of moderate stricture, it seems to have restored the normal calibre of the canal, or at least to have restored the calibre sufficiently to render micturition easy.

3. After the operation of urethrotomy, it will perhaps prove useful to prevent, or at least to retard notably, the return of the constriction.

4. In cases of varicose dilatation at the neck of the bladder, or in the membranous portion of the urethra, it appears calculated to be serviceable.

5. It seems to prove useful also in cases of partial or total hypertrophy of the prostate in old men. In such patients the first drops of urine, which are emitted with much difficulty and slowness, will serve effectually to fill the canal if the meatus be kept closed. When the ordinary calibre of the canal is once re-established in this way, the remaining contents of the bladder can be evacuated easily. The method has this great advantage, that it does away with the difficulty of emission after the first drops have escaped from the bladder; when it is not employed, the difficulty of emission persists during the entire act; the micturition, moreover, becomes intermittent, and the bladder is incompletely emptied, as a result of which, frequent desire to urinate is soon experienced.

#### RECENT PAPERS.

A Few Practical Remarks on the Surgery of the Bladder and Urethra. By Mr. R. P. White. (*Dublin Journal of Medical Science*, Jan. 1878.)

On the Operation for Hare-Lip Complicated with Projection of the Intermaxillary Bone. By M. Leon Le Fort. (*Bulletin Général de Thérapeutique*, Jan. 15.)

On the Treatment of Wounds in an Antiseptic Atmosphere Bounded by a Transparent Division, or Dressings under Glass. By M. L. Ollier. (*Revue Mensuelle de Médecine et de Chirurgie*, Jan. 10, 1878.)

On the means of preventing the Formation of Cysto-phosphatic Deposits. By Sir Henry Thompson. (*Lancet*, Feb. 2.)

Restoration of the Eyelid after Excision for Intractable Ulceration. By Mr. E. W. Collins. (*Medical Press and Circular*, Jan. 23.)

New Plan for the Operation on Double Hare-Lip, equally applicable to Unilateral Hare-Lip. By Dr. E. Bœckel. (*Gazette Médicale de Strasbourg*, Feb. 1.)

Comparative Study of the Methods of Dressing Large Wounds. By Dr. Cassedebat. (*Archives Générales de Médecine*, Feb. 1878.)

A Clinical Study of Hereditary Syphilis. By M. Parrot. (*Le Progrès Médical*, Nos. 41 and 47, 1877, No. 1, 1878.)

Bullous Syphilides. By M. Parrot. (*Le Progrès Médical*, Jan. 26.)

On Phlebitis. By Mr. W. S. Savory. (*British Medical Journal*, Feb. 2 and 9.)

The Semeiotic Value of Otorrhœa. By Dr. F. Baguzzi. (*Lo Sperimentale*, Jan.)

Tattooing as a Means of Communicating Syphilis. By Dr. F. F. Maury and Dr. C. W. Dullen. (*American Journal of Medical Sciences*, Jan.)

Disease of the Sacro-Iliac Synchondrosis. By Dr. C. T. Poore. (*Ibid.*)

Lithotripsy by a Single Operation. By Dr. H. J. Bigelow. (*Ibid.*)

Dislocation of the Hip of Twenty-Six Days' Duration Successfully Reduced. By Dr. M. H. Henry. (*Ibid.*)

Two Cases of Nerve-Stretching. By Dr. T. G. Morton. (*Ibid.*)

On the Treatment of Angiectasis by the Galvano-Cautery. By Dr. F. Valerani. (*Annali Universali di Med. e Chirurg.*, Jan.)

A Case of so-called Warm-Abscess. By Dr. Lorenzen. (*Berliner Klin. Wochenschrift*, Jan. 28.)

On the Various Forms of Periostitis, with special reference to Acute Purulent or Malignant Periostitis. By Dr. Podrazki. (*Allgemeine Wiener Medizin. Zeitung*, Feb. 5.)

#### MATERIA MEDICA AND THERAPEUTICS.

BÄLZ ON THE THERAPEUTIC ACTION OF THYMOL.—Dr. Bälz describes (*Archiv der Heilkunde*, Band xiv, 3 and 4 Heft) the results of comparative experiments with thymol and salicylic acid in Wund-erlich's service.

The thymol was administered either as an emulsion or as a mixture. The observations were made in healthy individuals, and on patients with typhoid fever, articular rheumatism, phthisis, and pyelitis, in almost all of whom pyrexia was present. Doses of a centigramme (.15 grain), if repeated many times, had no result. To produce an appreciable therapeutic effect, the dose had to be raised to a gramme and a half or two grammes (22½ or 30 grains) a day. The author made twenty-six observations, with the following results. If the drug came into direct contact with the bucco-pharyngeal mucous membrane, the patients complained of a sensation of pricking and of a bad taste in the mouth. Nausea was rarely produced, and only once vomiting, in a phthisical patient. If the dose were raised a sensation of heat at the epigastrium was produced, which was, however, transient; the patients also were often attacked with diarrhœa, the evacuations resembling those of typhoid fever. In a majority of the cases the injection of thymol was followed, half an hour or an hour afterwards, by sweating, which was more or less localised and abundant, but always less than that produced by salicylic acid and jaborandi. Sometimes, also, but not always, slight diuresis was noticed. The urine presented a dark and somewhat greenish colour, as if mixed with blood, and when viewed by transmitted light it appeared yellow brown. The addition of a solution of perchloride of iron rendered the urine cloudy and of a grey white colour. When the green colour predominated it might have been mistaken for icteric urine, or even for nephritic urine mixed with blood, but the absence of albumen in the latter case would prevent such an error. With regard to the nervous system, singing in the ears and deafness were noticed, and a sensation of constriction across the temples extremely disagreeable to the patients. More serious symptoms were sometimes observed. Thus in a patient in the third week of typhoid fever a dose of three grammes caused violent delirium, which lasted many hours, but ceased when the temperature was lowered. In another case of typhoid fever the patient lost consciousness, and then passed into a state of delirium followed by collapse, which lasted many hours, and caused very great anxiety. In typhoid fever and articular rheumatism, and in phthisis often, a dose of from two to three grammes will cause lowering of temperature of at least from 3° to 5° Fahr., but often the effect is greater than required, and the patients pass into deep collapse. To avoid these effects thymol is administered in fractional doses of 0.25 gramme (3¾ grains) every hour; this will give a total dose of 6 grammes (about 90 grains) in twenty-four hours. The circulatory system is relatively little influenced by thymol. When this drug causes a considerable lowering of the temperature there is a diminution of the frequency of the pulse, but not in proportion to the lowering of the temperature. The author attempted subcutaneous injections with a solution of thymol, but with no good result: the injection was often very painful, and readily gave rise



to inflammation. He concludes that thymol is uncontestedly an antipyretic, but uncertain in action, and has not the value of salicylic acid and salicylate of soda.

SCHMIDT AND LEBEDEW ON A CASE OF HYDROPHOBIA (?) TREATED BY OXYGEN.—Drs. Schmidt and Lebedew have treated by inhalation of oxygen a young girl, aged 12, who was bitten in the hand by a rabid dog. The wound implicated the skin and the subcutaneous cellular tissue. It was immediately cauterised by nitrate of silver, and at the end of a week cicatrisation was complete. Three months before the child had had diphtheria, followed by paralytic aphonia. Seventeen days after the bite she was seized with dyspnoea and dysphagia; the pulse was quick, and there was no evacuation from the bowels or bladder. Drs. Schmidt and Lebedew prescribed inhalation of three cubic feet of oxygen. The effect was immediate; in two hours and a half afterwards the patient was in a state of perfect calm. The next day there were fresh symptoms of hydrophobia; dysphagia, dyspnoea, tonic convulsions of the trunk and extremities, spasm of the respiratory muscles, and complete loss of consciousness. Another inhalation continued for forty-five minutes caused these symptoms to disappear. Slight dyspnoea alone persisted, but was overcome by monobromide of camphor, which was continued for three weeks. A month afterwards a certain atony of the innervation of the legs was observed, but soon disappeared, and the girl recovered perfect health, with the exception of the aphonia, which was consequent on the diphtheria. In 1875, Dr. Constantine Paul and Dr. Josias employed inhalations of oxygen in a very characteristic case of hydrophobia. In spite of the inhalations the patients died; but owing to the oxygen, asphyxia was delayed, and permitted the trial of various methods of treatment.

DEVAL ON THE BALSAM OF GURGUN.—Dr. L. Duval, writing on the balsam of Gurgun and some of its therapeutic applications, declares that this new drug may render valuable services to the treatment of blennorrhagia. He also advocates it in the local treatment of vaginitis, and places it above the balsam of copaiba. He refers to the success attained by Indian medical men in leprosy and other cutaneous affections, by means of this drug, although he acknowledges that this requires confirmation.

A. M. H.

REITER ON THE TREATMENT OF DIPHTHERIA BY LARGE DOSES OF CALOMEL.—Dr. M. C. Reiter contributes a paper to the *Philadelphia Medical Times*, January 5, 1878, of which the chief points are as follow. The observation of one case of diphtheria in the epidemic of 1863 led to the conviction that the disease is "not a poison of the blood, or in the blood, but an excess of fibrin, called in old times the inflammatory diathesis".

The author's belief in the use of calomel in inflammatory diseases made him vow to treat his next diphtheritic patient with this drug. He recommends the "free and bold administration of calomel every hour until the intestinal discharges resemble the fresh-water polyps in water-troughs, gelatinous, and of a bright dark-green hue." "Should prostration," it is added, "follow these heavy doses, you can rely on the fact that you have been mistaken in your diagnosis, and pronounced a case of follicular tonsillitis diphtheria." Dr. Reiter has believed for years that

each particle of calomel exercised the power of the point of a needle on the electric fluid, and attracted vital force to restore functional activity; but he adds that Dr. Murchison's work on *The Functional Diseases of the Liver*, has now solved every obscurity in understanding how calomel cures diphtheria.

The first case given is that of a child of three years old, in which the disease began on the day before she was seen. When seen, September 23, 1873, she was suffering from almost perfect aphonia, slightly stridulous respiration; the fauces were bright red, and covered with slight patches of exudation. [There is no notice given of temperature or of the state of the glands.—*Rep.*] The patient was treated with a ten-grain dose of calomel; then five grains every hour for two days, after which, every third hour. By the fifth day she had taken four drachms of calomel with no prostration, and was convalescent.

A second case given is that of a child aged eight months, who recovered from a similar attack after appearing moribund, having taken calomel at the rate of more than three grains per hour for 68 hours, without any signs of mercurialism.

Another apparently well-marked case is that of a servant aged 17, who had contracted the disease from a fatal case in the house. She was seen on October 2, 1877, after having felt unwell for some days. She was then complaining of soreness of throat and pain in head. "Has aphonia, can only whisper, pulse small, quick, and tense. Tongue furred. Throat of an intense glossy red, and a thin patch of diphtheritic exudation on right tonsil." She was bled to syncope, and then had 25 grains of calomel, in an hour 20 more, then 10 grains every hour. This treatment was continued till the 4th, when the calomel was omitted. On the fifth all her symptoms were favourable, and she was cured on the 8th.

[It may be remarked that *diphtheria* is not defined sufficiently well in the above paper to render the alleged cure by calomel the sole matter for discussion. The author's theories as to the pathology of diphtheria and the action of calomel seem to rest on a very insecure foundation. This, with his rejection of modern experience in his free use of the drug in all inflammations, should cause some hesitation before we lay much stress on such important conclusions on the treatment of diphtheria drawn from so few reported cases. Yet we may notice the statement that very large doses of calomel were attended in these successful cases by no signs of mercurialism or prostration, an occurrence, however, which might be partially explained by the event of free purgation. On this point, the author does not enlarge.—*Rep.*]

HORATIO DONKIN, M.B.

LARDY ON A NEW REVULSIVE.—A new therapeutic means is suggested by M. Lardy, who recommends extract of pimento as a revulsive. It is said to act in from ten to thirty minutes, and its action goes on increasing for three hours, when it becomes stationary, but retains its power of keeping up the irritant action, as long as may be desired; but in general after twenty-four hours in adults, or after eight to ten hours in children, it is better to remove the plaster. It produces no itching or pain, nor does it prevent the patient continuing his ordinary occupation. It may be compared to a mustard plaster, which, having reached half its power, continues so for twenty-four hours. The extract is a fine red colour, and is easily made into a plaster mass which may be spread upon paper. It needs no warming, as it sticks easily to

the skin, but in people who are moving about it is better to fix it with a bandage. Caution is advised in abstaining from touching the eyes, lips, or nostrils, with fingers which have meddled with this extract, as it causes some pain; but it is quite free from the dangerously irritative properties of castor-oil, thapsia, etc.

R. SAUNDBY, M.D.

BOUCHARD AND GIMBERT ON THE USE OF PURE CREASOTE IN PULMONARY PHTHISIS.—In the *Gazette Hebdomadaire*, Nos. 31 and 33, 1877, MM. Bouchard and Gimbert give the results of their observations on the effects of creasote in phthisis. They used a very pure preparation, free from carbolic acid, of specific gravity 1066, having a strong smell of tar, forming a clear solution with collodion, soluble in diluted alcohol, and, when treated with chloride of iron, yielding a green colour, which soon passed into brown. The following formulæ are specially recommended.

Pure creasote, 13.5 parts; tincture of gentian, 30 parts; alcohol, 250 parts; Malaga wine sufficient to make up a thousand parts; of this, from two to five tablespoonfuls are taken in water daily.

Or a mixture is made of 2 parts of pure creasote with 150 of cod-liver oil.

The daily dose of creasote varied between 40 and 60 centigrammes (6 to 9 grains); in rare cases as much as 80 centigrammes to a gramme (12 to 15 grains) was used.

In this way the authors treated 93 patients in various stages of phthisis. Of these, 25 were "apparently" cured, 29 were improved, 18 remained no better, and 21 died. The term "apparent recovery" is applied by the authors to cases in which the cough and expectoration ceased, the fever disappeared, the weight increased, and the physical signs changed so as to indicate cicatrisation. By "improvement" they denote a condition in which the cough and expectoration were permanently lessened, the body-weight increased, and the physical signs indicated an arrest, or a diminution of the process of destruction.

Of the 93 patients, 25 (27 per cent.), were apparently cured, viz., 5 in the first and 20 in the second stage of the disease. Of the 29 (31 per cent.) patients who were improved, 3 were in the first, 21 in the second, and 5 in the last stage. Of the 21 (23 per cent.) who died, 12 were in the second, and 9 in the third stage. Creasote thus exercised an unmistakably favourable influence on 54 cases out of 92. This influence consisted chiefly in diminution of the expectoration, cough, and fever, while the appetite, strength, and weight were increased. In most cases the night-sweats disappeared under the use of the remedy. Some days before the diminution of the expectoration and cough, an improvement can be detected in the physical signs, especially those which depend on the presence of fluid in the bronchi and in the cavities; later, the symptoms indicating induration of the pulmonary tissue disappear or are improved. The latter action sometimes takes place, the authors say, with almost incredible rapidity. The authors cannot yet say, as they have not yet had an opportunity of making a *post mortem* examination, whether the favourable action of the remedy lies in obsolescence (calcification) of tubercle.

The chief benefit of this treatment appears due to the limitation of the bronchial secretion; and this leads in the end to diminution of the cough, which at first generally increases under the use of creasote. If the cough remain obstinate or become worse, the

further use of the medicine must be stopped. The creasote treatment is especially beneficial in cases attended with expectoration of purulent or fetid matter. As regards hæmoptysis, it seems that creasote does not act as a curative, but only as a palliative, rendering the attacks of hæmorrhage less frequent. The reduction of the fever is to be ascribed to the improvement in the local affections of the lung. Creasote appears to have no influence on the diarrhoea of phthisical patients; on the other hand it improves the appetite, and is efficacious against the frequent vomiting to which the patients are subject. The authors, in summing up, conclude that creasote is indicated in phthisis generally, except in florid phthisis. The contra-indications to its use are, intolerance on the part of the stomach, and increase of the cough and dyspnoea in certain asthenic forms of the disease.

HAMBURGER ON ABSORPTION OF MEDICINAL SUBSTANCES BY THE VAGINAL MUCOUS MEMBRANE.—Dr. E. W. Hamburger describes (*Prager Vierteljahreschrift*, Band cxxx) a series of experiments performed by him to ascertain the absorbent power of the vaginal mucous membrane. He used solutions of the following substances, of the strengths indicated: Iodide of potassium, 15 per cent.; ferrocyanide of potassium, 5 per cent.; ferridcyanide of potassium, 9 per cent.; salicylic acid, 2 per cent.; bromide of potassium, 6 per cent.; and lithia, 10 per cent. A plug of purified cotton-wool soaked in the solution was placed in the vagina, and over it two dry tampons. The bladder was first emptied, and afterwards the urine was drawn off by the catheter and examined at intervals of two or three hours. All the above-mentioned substances were found in the urine. Iodide of potassium was found two hours after the introduction of the tampon, and traces of it remained twenty-four hours after removal. Ferrocyanide of potassium, salicylic acid, and bromide of potassium appeared three hours after they were given. Hamburger believes that the administration of drugs by the vagina can be employed in all cases of obstruction of the normal passages, and that it will be specially useful in gynaecological practice.

PIROCCHI ON THE USE OF TAYUYA IN PHAGEDÆNIC AND SCROFULOUS ULCERS AND BLENNORRAGIA.—In the *Giornale Italiano delle Malattie Veneree e della Pelle* (1877) Dr. Pasquale Pirocchi states that he has used dilute tincture of tayuya (10 parts in 30 or 40 of water) as a local application in phagedænic and scrofulous ulcers, and in blennorrhagia. The ulcers became modified very soon after the application, twice or thrice in the day, of charpie steeped in tincture of tayuya; while in two cases of blennorrhagia the daily injection of the same remedy did not produce a favourable result. The author hence regards tincture of tayuya as a valuable topical remedy, capable, perhaps, of competing with the actual cautery in the treatment of phagedænic sores. He thinks that the tincture of tayuya, being a tonic and astringent, reduces suppuration in the soft parts, stimulates granulation, and facilitates cicatrisation. As regards gonorrhoea, he does not consider tayuya superior to the balsams and other remedies ordinarily used.

A. HENRY, M.D.

WOOD ON THE ACTION OF SOPHORIA SPECIOSA.—Dr. H. C. Wood, of Philadelphia (*Philadelphia Medical Times*, abstracted in the *Dublin Journal of Medical Science* for January 1878), has made a partial



chemical study of this plant, from the beans of which he has obtained an organic principle, an exceedingly active poison, the minutest speck producing in two minutes almost entire paralysis in the frog. One-twentieth of a grain of a very impure specimen produced in a half-grown cat deep sleep, lasting many hours. As this substance is not soluble in water but is soluble in acidulated water and is precipitated by alkalies, and as it dissolves freely in ether, imparting to it a decidedly alkaline reaction, it must be looked upon as an alkaloid. Dr. Wood proposes for it the name of *Sophoria*. He obtained it of a greyish-white colour, but did not succeed in crystallising either it or its acetate. Its reactions, as far as he has examined them, are as follows (the tests were made by placing a speck of the alkaloid upon a porcelain plate and applying the re-agent): with concentrated sulphuric acid, no colour: with chromic acid and concentrated sulphuric acid, a dirty, deep purple, passing rapidly into bright green, then into bluish, and finally into yellowish brown: with tincture of the chloride of iron, a deep, almost blood red, after a time acquiring an orange tint: with nitric acid, no colour: with chromic and nitric acid, a very faint evanescent reddish colour: with nitromuriatic acid, a dirty reddish brown. From the solution of its acetate, compound tincture of iodine throws down a yellowish precipitate. He has made physiological experiments with an alcoholic extract of the bean upon the lower animals sufficient to outline its general action. In frogs it produces a rapid loss of reflex activity and power of voluntary movement. The loss of power is not due to any action upon the motor nerve-trunks, as after death these were found to preserve their normal susceptibility. Further, tying the sciatic artery upon one or both sides of the frog did not influence the action of the drug upon either voluntary or reflex movements. This would indicate that the poison is a spinal sedative, and has little or no effect upon either motor or sensitive nerves. In all cases the heart continued beating long after the cessation of respiration. Upon mammals the effect varies somewhat in accordance with the dose. An amount of the extract estimated at two grains (?) produced in a full-grown tom-cat in one minute marked weakness in hind-legs; in two minutes inability to stand, with evident effect upon the respiration; in three minutes convulsive movements, with loss of consciousness, continuing with ever-increasing embarrassment of the breathing for three minutes, when all attempts at respiration ceased. The heart kept on breathing for one and a half minutes longer. The pupils were unaffected at first, afterwards dilated. In small quantity the extract produces in the cat vomiting, great muscular weakness, profound quietude and deep sleep, lasting some hours, and ending in recovery. In dogs the symptoms were similar to those noted in cats. Death always took place through respiration. In a single cardiac experiment the drug had no decided effect upon the blood pressure until towards death, but appeared to accelerate the cardiac beat.

PLANAT ON ARNICA AS A REMEDY FOR BOILS.—In the *Journal de Thérapeutique* for Jan. 25, 1878, Dr. Planat writes that he has found arnica possessed of rapid and constant efficacy in cases of boils. He was led to try arnica in these cases from the result of physiological experiments made by him, with the view of studying the *modus operandi* of this substance on wounds. Its property of producing

resolution, evidently due to its influence on the vaso-constructor nerves, gave him the idea of applying it in all cases of acute superficial inflammation, such as boils, angina, erysipelas, etc. These experiments have convinced M. Planat that arnica arrests all furuncular eruptions with remarkable rapidity. M. Planat makes an exception in the cases of diabetic boils, which have not come under his observation, and of carbuncle, which, by reason of its exceptionally serious character, he has treated in the ordinary way. He has been equally successful in cases of erysipelas and acute simple angina, but is not quite so clear about this as of the case of boils. The arnica was applied directly to the inflamed parts in the form of an ointment, composed of 10 grammes of extract of fresh arnica flowers to 20 grammes of honey. If this mixture be too thin, lycopodium or althea powder, or any similar substance, may be added so as to give it the necessary consistence. It is spread on diachylon plaster or oiled silk, and applied to the boil. Generally it is sufficient to renew this dressing once in twenty-four hours. Two or three applications generally cause the boil to die away at all stages of its evolution.

Dr. Planat has also given internally in cases of this character tincture of arnica in doses of from 25 to 30 drops in a draught to be taken in teaspoonfuls every two hours, and has thereby obtained so rapid an extinction of the furuncular eruption that it seemed impossible to him to deny the special action of the drug. He, however, noted greater efficiency from its direct application.

NAIRNE ON THE EXTERNAL USE OF TINCTURE OF BELLADONNA IN NIGHT-SWEATING.—Mr. Nairne writes in the *British Medical Journal* of February 2, that for some little time past he has employed the common pharmacopœial tincture of belladonna for sponging the body in cases of phthisical and excessive sweating, and invariably with marked benefit. So far as his experience goes, he has found it very much better than anything else; if applied before a sweating comes on, it prevents it; if during the sweating, it almost immediately controls it. Two teaspoonfuls of the tincture mixed with an equal quantity of whisky are quite sufficient (applied with the hand), to cover the whole body and produce the desired effect.

KÖNIG ON THE COMBINED USE OF CHLOROFORM AND MORPHIA.—Professor König, in a communication to the *Centralblatt für Chirurgie* (No. 39, 1877), says he has combined the hypodermic administration of morphia with that of chloroform in a large number of cases, with very favourable results. It is seldom necessary to give more than one or at most two centigrammes ( $\frac{1}{16}$  to  $\frac{1}{8}$  grain).

The indications for the use of morphia during chloroform-narcosis are twofold: 1. Motor disturbances occurring before or during chloroform-inhalation, unless these are very transitory: 2. Operations of such a nature that the chloroform-narcosis cannot be maintained throughout, and especially towards the end. Among the latter may be particularly mentioned operations upon the eye, plastic operations, extirpation of tumours from the soft parts of the face. The object of using morphia is to induce analgesia over and above the chloroform-narcosis, and also that this narcosis should not be pushed so far. As regards any danger which may be connected with the combination of narcotics, König esteems this lightly. He says that out of seven

thousand cases in which he has used chloroform, none have died from it, and many of these took morphia also.

**HERPES ZOSTER TREATED BY CHLOROFORM INJECTIONS.**—In the record of cases in the practice of Dr. O. W. Doe in the Boston City Hospital (*Boston Medical and Surgical Journal*, October 18), the following case is related.

Mr. J. O'N., aged 23, entered the hospital July 23rd with the following history. Ten days before, he began to be annoyed with pain in the chest about both nipples. In the course of a few days he noticed an eruption on the right side, which continued up to entrance. At that time the pain, severe in character, was mostly confined to the seat of eruption, extending across the axilla to the right shoulder, and down the arm towards the elbow. Appetite and digestion were good. The bowels and micturition were normal. Pulse 96; temperature 100°. An injection of fifteen minims of chloroform was ordered night and morning, locally in the affected side. After two or three injections the pain was entirely relieved, and remained so, while the eruption, which was a well-marked type of herpes zoster, left to itself, healed rapidly, and the patient was discharged well August 1st.

**DALY ON THE TOXIC ACTION OF SALICYLATE OF SODA.**—Dr. F. H. Daly describes in the *British Medical Journal* of January 19, the following case as an example of the toxic action of salicylate of soda.

On November 4th he was sent for to see Mrs. B., aged 50, suffering from rheumatic fever in a severe form: both knees, one ankle, one shoulder, and both wrists were greatly swollen, and exquisitely painful. She was sweating profusely, the tongue was coated, and the temperature 102.3°. Dr. Daly ordered milk diet and twenty grains of salicylate of soda every two hours. He again saw the patient in twenty-four hours. She had taken the twenty-grain dose regularly every two hours, and he found her quite free from pain, sweating very little, and the swelling nearly gone. The temperature was normal. She had slept very little, and was incoherent and inclined to call things and people by wrong names. She was ordered to take the salicylate every three hours. On the 6th he found her quite delirious, refusing to take food or medicine, unless forced, and labouring under all kinds of absurd delusions. She appeared quite free from pain, and the temperature was still normal; but she had not slept at all, and was wandering the whole night. She was ordered to stop the salicylate of soda, and to take an alkaline with quinine; also twenty-five grains of chloral-hydrate at bed-time. After the visit the delirium became violent, but the chloral at bed-time gave six hours' sleep, and next morning she was quite rational and much better, only complaining of pain in the right wrist. The urine was quite dark and contained a very little albumen. He resumed the salicylate of soda in ten-grain doses, with a grain of quinine, three times a day; and from this day there was no further trouble from the joints, but an attack of rheumatic conjunctivitis retarded the convalescence.

**FOULIS ON THE TREATMENT OF CHRONIC PHARYNGITIS.**—Dr. Foulis (*Glasgow Medical Journal*, October, 1877) having tried in vain the usual remedies for chronic pharyngitis in a large number of cases, resorted to the plan recommended by Carl Michel (*Deutsche Zeit. für Chirurgie*, 1873)—namely, the application of the actual cautery. Michel uses

the galvano-cautery; but, this being expensive, Dr. Foulis had some ordinary irons made. These were heated in the fire and applied. "The effect was quite what could be wished. Not only were the thickened patches easily and completely destroyed by the cautery, but its use was attended with but trifling pain, and there was absolutely none of the former hawking and expectoration of mucus which the soda-lime caustic occasioned. A little swelling often followed the use of the hot iron, reminding the patient, for twenty-four hours or so, of what had been done, but I have never seen any more serious disturbance after it. This feeling of swelling and dryness was easily combated—a little bit of fresh butter flavoured with lime-juice, allowed to melt in the mouth, lubricated the throat, and gave relief after the burning."

The cautery is best employed at a dull red or black heat, and a week should elapse between the applications, to allow the white eschar to disappear. The application should not be made at random all over the pharynx, but each spot which is thickened must be sought out and separately touched; for this, it is convenient to have cauteries of different shapes. The number of applications vary from three or four to ten or twelve.

**KUNZE ON CURARA IN EPILEPSY.**—C. F. Kunze (*Deutsche Zeitschr. für Prakt. Med.*, 1877, No. 9) suggests the employment of subcutaneous injections of mixture of half a gramme (gr. 7½) of curara in 5 grammes (Div) of water, with the addition of two drops of hydrochloric acid. Eight drops of this solution are injected, in adults, at intervals of a week. In a number of cases in which this method of treatment was employed, a few weeks sufficed to bring about a marked amelioration in the epileptic symptoms.

**SMITH ON BELLADONNA IN DYSENTERY.**—Dr. Smith of Cloverdale (*Nashville Journal of Med. and Surg.*, August; and *New York Medical Record*, November 10), recommends the use of belladonna in the treatment of dysentery, and states that he has obtained more satisfactory results with it than with any other drug. He frequently gives from two to four drops of the fluid extract every one, two, or three hours, until the griping pains are relieved. The full remedial effect is in some cases not manifest, until slight delirium or disturbance of vision is produced, but these symptoms disappear when the belladonna has been withheld for a few hours.

**FOURNIER ON A METHOD OF ADMINISTERING CREASOTE.**—At the meeting of the Paris Société de Thérapeutique on December 20, M. Fournier submitted a tasteless preparation made by incorporating pure creasote with cod-liver oil, which dissolves it very well. The compound is then enclosed in gelatine capsules. Each capsule contains two centigrammes (.08 grain) of creasote dissolved in half a gramme (7½ grains) of cod liver oil. M. Fournier says that these capsules are very well tolerated, as the cod-liver oil completely annihilates the caustic or irritant properties of the creasote.

**GILMAN ON CHLORODYNE.**—In the *Boston Medical and Surgical Journal* for December 13, Dr. John H. Gilman says:—Some time ago I made some experiments with the object of producing a chlorodyne in which all its ingredients should be so combined as to form a perfectly clear solution, which could be diluted with water without separating its



component parts, and a preparation of which each dose should contain a definite quantity of each active ingredient. Taking advantage of the fact that chloroform is soluble in glycerine (one part to six or seven), I have added glycerine to my formula to replace part of the treacle, in order to render the chlorodyne a perfect solution. As elixirs are now fashionable, I have given this preparation the technical name of *Elixir Chloroform Compositum* (Chlorodyne):

R. Chloroformi, ʒij.; glycerinæ, ʒij.; spiritus vini rectificati, ʒij.; spiritus menthæ piperitæ, ʒij.; acidi hydrocyanici diluti, ʒij.; tinct. capsici, ʒij.; morphinæ muriatis, gr. viij.; syrupi (treacle), ʒiij.; M. Dose for an adult, one teaspoonful; for a child one year old, three to five drops, diluted with water, repeated at proper intervals if necessary.

A fluid-drachm contains two minims each of chloroform, dilute hydrocyanic acid, tincture of capsicum, and essence of peppermint; also an eighth of a grain of morphine. The treacle employed should be the best sugar-house molasses (golden syrup). This chlorodyne requires no special skill to compound, and is equal to any for the relief of pain, vomiting, cholera morbus, etc. The dose of this preparation, it should be remembered, is greater than that of Brown's chlorodyne.

**SQUIBB ON COD-LIVER OIL.**—At a meeting of the King's County Pharmaceutical Society (*King's County Medical Transactions*, New York, vol. II), Dr. Squibb said that the purity of cod-liver oil was a very important subject, on account of its very general use, and because the stomachs of those persons who needed the oil most were least able to retain it. He greatly preferred the Norwegian oil, because of its greater purity, on account of the manner of its manufacture. In Norway the cod-fishery ceases, by law, about the middle of April, and is not resumed until late in the autumn. Great care is observed in the preparation of the oil, scarcely any heat being used. Only the finest of that produced is exported.

The addition of ten drops of ether to two drachms of the oil had met with very satisfactory results, by stimulating the flow of pancreatic juice which emulsifies the oil, and thereby increased its assimilation. One drachm of the oil three or four times a day was sufficient in a majority of cases.

Dr. Squibb had found that cod-liver oil given in a five per cent. solution of gum-arabic, previously poured into a small medicine glass, tended greatly toward covering the taste. Froth from porter was also an excellent vehicle, or some salt herring, eaten just before taking the oil, would make its taste imperceptible.

**DE PONTÈVE ON THE ADMINISTRATION OF COD-LIVER OIL.**—Dr. de Pontève writes to *L'Union Médicale* to describe a method to conceal the taste of cod-liver oil and to facilitate its absorption. He mixes a teaspoonful of the oil intimately with the yolk of an egg and ten drops of tincture of peppermint, to which he adds half a glass of sugared water. He thus obtains an emulsion which differs very little from ordinary milk. There is neither the characteristic taste nor the odour of cod-liver oil, and the patients take it without the slightest feeling of repugnance. Further, the oil having been rendered miscible in water in all proportions, it is actually emulsionised, and its absorption is more certainly secured.

**IMPROVED ADHESIVE PLASTERS.**—Dr. Martin, in the *Boston Medical and Surgical Journal*, describes a new form of plaster which he has invented to supersede ordinary adhesive plaster. It is formed by incorporating Para caoutchouc and Burgundy pitch with a small proportion of balsam of tolu. This mixture is spread on a strongly woven cloth. A sticking plaster which will not cause irritation, which will adhere well, and which will perform its guarantee "not to wash off", is, says the *Pharmaceutical Journal*, certainly a desideratum, and if this method succeeds it will doubtless be rewarded with commercial success. The Japanese have already solved the difficulty by the very simple plan of spreading birdlime on paper or cloth or silk, and applying it to wounds or cuts, which it is stated to heal rapidly. It may not be generally known that birdlime can be dried and powdered, and will regain its properties when moistened. The properties of this substance certainly deserve examination from a surgical point of view, and its portability and easy application might permit of its forming a portion of the kit of every soldier, and its use might to some extent prevent such harrowing scenes as have been described as occurring in the Turkish war, when doctors have not been procurable for several days together.

**FORMULÆ.—Night-sweats.** M. Porcher gives (*L'Union Médicale*, November 6) the following formula for the night-sweats of phthisis.

Sulphate of atropine, 0.15 grain; extract of gentian, 1½ grains; acacia sufficient to make ten pills. Dose, one or two a day.

**Asthma.**—M. Desnos (*L'Union Médicale*, November 10) gives the following formula for an antiasthmatic elixir. Snakeroot, 45 grains; water, 4 ounces; boil until reduced one-half, strain and add 90 grains of iodide of potassium. After cooling, add brandy, 2 ounces; syrup of opium, 4 ounces. Filter. Dose two or three tablespoonsful a day for asthmatics; the first before breakfast and the other between meals.

## RECENT PAPERS.

- On the Treatment of Gastralgia by the Internal Stomach-Douche. By Dr. M. Malbranc. (*Berliner Klinische Wochenschrift*, Jan. 28.)
- On Double Chloride of Mercury and Sodium, and its Therapeutic Uses. By Dr. E. Stern. (*Ibid.*, Feb. 5.)
- On Dialysed Iron and its Therapeutic Value. By M. Boucharda. (*Bulletin Général de Thérapie*, Jan. 30.)
- On the Therapeutic Effects of Chlorhydrate of Pilocarpine. By Dr. Leyden. (*Ibid.*)
- Note on the Therapeutic Virtues of the Eucalyptus Globulus. By Mr. Benjamin Bell. (*Edinburgh Medical Journal*, Feb. 1878.)
- Quinine a Physiological Antidote to the Malarial Poison. By Dr. F. W. Moinet. (*Ibid.*)

## OBSTETRICS AND GYNÆCOLOGY.

**LABATUT ON NORMAL LABOUR DURING EXTRA-UTERINE PREGNANCY.**—In the *Journal de Médecine*, Nov. 1877, M. Labatut reports the following case. A woman had had a previous normal labour, and, two years later, had all the signs of pregnancy. At the end of five months, after progressive development of the abdomen, she had violent pains, but without result. After their cessation, she was sick for six months. Menstruation then reappeared, and the patient enjoyed tolerable health. The tumour subsided, the pains disappeared. Five years later, the catamenia were again suppressed. After several

months, she was examined by a midwife of Toulon, Madame Rampin, who diagnosed pregnancy at the ninth [month. She detected also a voluminous tumour in the right side, which, after hearing the patient's history, she attributed to an extra-uterine pregnancy. Fifteen days after this, the patient was naturally delivered of a living child. She lived two years, and died at the Toulon Hospital, of pulmonary tuberculosis. At the necropsy, there was found in the right Fallopian tube a fetus at term, macerated, and enveloped in a thick pouch. The case was then one of tubal pregnancy, dating back five years. Notwithstanding this, there had been normal conception and delivery.

**LEBLOND ON AMPUTATION OF THE NECK OF THE UTERUS.**—In the *Annales de Gynécologie*, January 1878, there is an article by Dr. A. Leblond on amputation of the neck of the uterus. The author points out the anatomical fact that the neck of the uterus consists of two portions—the supravaginal, situated above the insertion of the vagina into the neck of the uterus, and the intravaginal; or portion which projects into the vagina below this point. He then discusses the question, Ought the amputation to be performed at the vulva or in the vagina? Dr. Leblond is of opinion that the amputation should be done inside the vagina, as the danger of opening the pouch of the peritoneum, which dips down behind the uterus, is avoided, and the relation of adjacent organs is respected. He prefers the galvano-cautery, especially in malignant disease. In default of the galvanic cautery, the ecraseur is the safest instrument. Where the galvano-cautery and ecraseur are not admissible, he uses scissors. The knife should only be used in cases of hypertrophic elongation of the intravaginal portion of the cervix. In order to facilitate the application of the noose of platinum-wire round the cervix, Dr. Leblond has designed a bivalve speculum, which fits over the cervix and carries the wire round it. The wire is tightened, and the speculum is withdrawn before the connection with the bichromate of potash current is made.

**ZWEIFEL ON THE PROPHYLAXIS OF PUERPERAL FEVER.**—The *Berliner Klinische Wochenschrift* for January 7 contains an article by Dr. Zweifel on the advantages of the antiseptic treatment as a preventive of puerperal fever. He mentions Bischoff as the first who adopted Lister's treatment in child-bed. Bischoff's plan is to give a bath at the commencement of labour-pains, and to wash out the vagina with a 2 per cent. solution of carbolic acid. This injection is repeated every two hours. The attendant's hands are disinfected in a 3 per cent. carbolic solution before each examination. In place of the time-honoured lard, a 10 per cent. carbolised oil is used. When it is necessary to pass the hand into the uterus, its cavity is also washed out with a 2 or 3 per cent. carbolic solution. After delivery, any little rent or wound is dressed with one-tenth carbolic solution. A pad of cotton-wool, dipped in 10 per cent. carbolised oil, is placed at the vulva. During the first thirteen days the lying-in woman, whether sick or not, has frequent vaginal and uterine injections of carbolic solution. This treatment has been successful in the hands of Bischoff; but, like that of Schücking, which consists in a permanent uterine irrigation, it is too strict and minute. By the employment of a modified antiseptic treatment, Dr. Zweifel has confined 184 women at his lying-in hospital without a death.

Several had febrile symptoms, which disappeared under the Lister treatment. Dr. Spiegelberg has only lost 5 mothers in 900 labours, by taking similar antiseptic precautions.

[It must not be forgotten that Professor Tarnier has obtained equally satisfactory results in his pavilion at the Paris Maternity by care and cleanliness alone, unaided by carbolic acid.—*Rep.*]

**MACKENZIE ON PUERPERAL SEPTICÆMIA WITH METASTATIC PANOPHTHALMIA.**—At a recent meeting of the New York Obstetrical Society, Dr. Colin Mackenzie read the history of a primipara who underwent, on the 23rd March, 1877, a normal delivery. Immediately after the expulsion of the placenta, which was expressed, the patient exclaimed, "Doctor, I am faint and sick." She was attacked with vomiting, nausea, and loss of pulse at the wrist. At the end of two hours, after the administration of brandy, milk, and ergot, she seemed to have entirely recovered. She continued to improve for three days, when she complained of slight pain on the left side of the pelvis. Two days after she seemed quite well; pulse 100, temperature 101° F.; no tenderness on pressure. On 5th April, fourteen days after labour, she had a severe attack of neuralgia of the right side of face and head; pulse 106, temperature 102° F. The following day she seemed well. On the 7th she was seized with excruciating pain in the left eyeball. At 11 A.M. she could see perfectly, the only appearance being congestion of the conjunctiva. At 5 P.M. on the same day the eyeball protruded, the cornea was opaque, and sight was gone. Dr. T. R. Pooley was called in, who found that there was swelling of the lids, and some frothy purulent discharge of a muco-purulent character. The cornea was diffusely opaque, and showed a circle of purulent infiltration just within the sclero-corneal margin, the centre of which permitted light to pass to such an extent that pus could be seen in the anterior chamber. The cornea was anæsthetic; perception of light was good; no increase of tension. The diagnosis of metastatic iridochoroiditis was made, and a hopeless prognosis given. Quinine in large doses was given; the temperature rose to 104.5° F.; she was placed in cold baths. The temperature still rose, and the elbow-joint became stiff, and intensely painful. On the 9th April her temperature was 105°, pulse 120; the cold baths were stopped, and, in addition to five grains of quinine every two hours, fifteen grains were ordered every sixth hour. On the 10th the pulse was 130-40, temperature 105.2° F., respiration 48, and the tarso-metatarsal joint of the left great toe swollen, red, hot, and tender. The eye was discharging through the cornea. From this to the 16th April she gradually became weaker, temperature rose to 107.5° F., and she died at 11½ P.M. on that day. No necropsy was made.

FANCOURT BARNES, M.B.

**SLOAN ON THE MANAGEMENT OF THE NIPPLES.**—At a meeting of the Glasgow Medico-Chirurgical Society on November 20 (*Glasgow Medical Journal*, January 1878), Dr. Samuel Sloan said that the plan which he followed consisted in the application of general principles to the special circumstances of the nipples. The nipple is carefully washed with tepid water after each act of sucking, and then bathed with a mild astringent lotion, of which glycerine forms an important part, as it prevents drying. A properly constructed shield is immediately afterwards applied to protect the organ from the dress, whilst, to prevent scalding of the nipple from



excessive moisture, this shield is pierced over the whole of its extent with openings of about one-sixteenth of an inch in diameter. Should the nipple continue to be painful on the application of the child's mouth, he insists on the immediate use of a properly fitting artificial teat. If, notwithstanding these measures, the nipple became ulcerated, he advised the immediate removal of the child from that nipple till the part, under the use of a good breast-exhauster, should be sufficiently restored to permit of its re-application.

The concluding part of Dr. Sloan's paper was devoted to the prophylactic treatment of the nipples. Beginning at the end of the seventh month of pregnancy, he advised the washing of the nipples with cold water and glycerine soap every night, and the subsequent thorough application of a strong astringent, composed of one teaspoonful of dry tea, and two spoonfuls of Price's glycerine in one ounce of brandy. This is left on all night, and in the morning, a piece of lard or other fatty substance is rubbed well into the nipple. When the child is born he advised its limited application to the nipple; immediately after sucking, the nipple is bathed with a mild astringent lotion, composed of tincture of arnica and Price's glycerine—of each one part, and water ten parts. The nipple is then partially dried, and a nipple-shield, prepared as described above, at once applied.

**MILLER ON ALLAYING IRRITATION OF ACTIVELY SECRETING MAMMARY GLANDS BY BELLADONNA-COLODION.**—At a meeting of the Glasgow Medico-Chirurgical Society (*Glasgow Medical Journal*, January 1878), Dr. Hugh Miller stated that he had adopted belladonna as a good agent for allaying irritation and preventing the secretion of milk. With a view to avoid friction and obtain the full therapeutic use of the agent, he had an alcoholic extract prepared of double the strength of the emplastrum belladonnæ, but kept fluid by collodion, and with camphor added. The preparation was painted over the breast night and morning, until the acute symptoms subsided. It was useful, whether the inflammation accompanying the onset of the lacteal secretion had, for its exciting cause, exposure to cold, inflamed nipples, or obstruction in the lacteal ducts. The preparation was also used by applying it to both breasts every day, when the mother did not intend to suckle the child. The application in these cases was begun before the secretion of milk was established.

**ROUSSEAU ON EXTRA-UTERINE PREGNANCY TREATED BY GASTROTOMY.**—Dr. Rousseau of Epernay reports (*Union Médicale et Scientifique, du Nord-Est*, 30 September) a case of extra-uterine pregnancy, in which gastrotomy was performed five months after the death of the fetus, and fourteen months after the commencement of the pregnancy. In order to produce adhesions and prevent opening into the peritoneal cavity, the actual cautery was used. A knife-shaped instrument was heated to a white heat, and with it the anterior wall of the abdomen and the placenta, which was attached to it, were gradually divided: six sittings, at intervals of five or six days, were required for this purpose. After the sixth sitting, the patient's condition was such as to render longer delay inadvisable, and the remaining portion of the placenta, which was about two-fifths of an inch thick, was divided with a bistoury. A little black blood escaped when the pla-

centa was cut. The head could now be felt, and, as it seemed large, craniotomy was performed, and the bones of the cranium removed piecemeal. The entire fetus was then taken away without difficulty. Without the brain, and after being two days in alcohol, it weighed over six and a half pounds. The placenta was firmly attached to the abdominal wall, and bled on puncture. For fear of hæmorrhage and of peritonitis, no attempt was made to remove it or the membranes. The patient did well immediately after the operation, but a few days afterwards was seized with a phlebitis, from which, however, she recovered speedily. There was no peritonitis at any time. The placenta did not slough out, but gradually diminished in size, and became involved in the cicatrix. Ten weeks after the operation the patient left the hospital, with a fistulous opening in the abdomen, from which a small quantity of thick pus escaped. This opening remained for several years, and during this period a tumour formed by the placenta and membranes could be felt in the abdomen. M. Rousseau alleges that this case proves that the placenta and membranes can be left without fear in the abdominal cavity after gastrotomy, provided they are still living and attached. He thinks that the adoption of this practice as a rule will diminish greatly the unfavourable chances of the operation. In this case the cauterisations were not, as it turned out, necessary to prevent opening into the abdominal cavity, since the attachment of the placenta to the anterior wall of the abdomen removed all danger of that. They proved very useful, however, in preventing hæmorrhage from the living and vascular placenta.

**MURILLO ON THE TREATMENT OF OBSTINATE VOMITING DURING PREGNANCY BY DILATATION OF THE CERVIX UTERI.**—A woman, aged 22, in the second or third month of her first pregnancy, entered the Maternity Hospital of Santiago, under the care of Dr. A. Murillo, suffering with incessant vomiting (*Revista Medica de Chile*, Año V, num. 6). She was very weak, had gastric distress, and vomited every two or three minutes, ejecting food, bilious matter, and mucus. The tongue was coated, the pulse 120 per minute and feeble, the skin dry and hot, and giddiness like that of sea-sickness prevented her from sitting up. As pepsin, calmatives, tonics, ice, milk, etc., had been tried without result, Dr. Murillo determined to resort to dilatation of the neck of the uterus, as recommended by Dr. Copeman of Norwich, before resorting to measures to induce abortion. He therefore introduced the finger into the softened cervix as far as the internal orifice, and kept it there for two minutes. He then ordered ice-cold milk-punch by the mouth; and broth, pepsine, and hydrochloric acid by enema twice daily. The cervix was dilated in a similar manner four different times, at intervals of one or two days; and morphia was given to produce sleep, which, however, did not have the desired effect. At the end of a week the improvement was very marked, the patient vomited less frequently, retained the light aliment allowed, and could sit up without being giddy. In eleven days she left the hospital to go to the country, not entirely cured, but very greatly benefited.

**HILL ON A CASE OF ATRESIA OF THE ANUS WITH RECTO-VAGINAL FISTULA.**—At a meeting of the Strafford District (New Hampshire) Medical Society (*Boston Medical and Surgical Journal*, January 10), Dr. L. G. Hill reported a case of atresia of

the anus, with a recto-vaginal fistula, which had served as an artificial anus for years without the true nature of the difficulty having been suspected. The discovery was made by Dr. Hill, as he, in consultation, was making an examination for uterine disease.

The patient was a married lady, and the mother of several children, and had acquired some malposition of the uterus. The perinæum was very narrow, and the orifice of the anus was completely closed, leaving only a slight depression at its site. On introducing the finger into the vagina, a circular opening was found in the posterior wall, through which the forefinger passed with ease into the rectum. The muscle surrounding the fistula seemed to have some slight sphincter power. The patient related that, when she was a girl, she was one day searching for eggs in her father's barn, and, while attempting to slide down from the hay, slipped upon part of an ox-bow, which was nailed to the side of a post, and which was used to hang harness on. The free end of the ox-bow entered the vagina, and held her fast, until relieved by friends. The family physician said that there was no rupture; that she had sustained only a severe contusion, and treated her by placing an oiled tent in the vagina to prevent inflammatory adhesions. The physician in attendance, who had been often called during the last twenty years, mentioned to Dr. Hill that he could never induce his patient to take cathartics, nor did she ever give him a satisfactory reason for her refusal to do so.

#### RECENT PAPERS.

- Contribution to Study of Hæmatocœle consecutive on Extra-uterine Pregnancy. (*Annales de Gynécologie*, Jan. 1878.)  
On Anæsthesia in Natural Delivery, and on Legrone's Apparatus for Administering Chloroform to Parturient Women. By M. Bailly. (*Bulletin Général de Thérapeutique*, Jan. 15.)  
Some Cases of Dystoria from Narrowness or Deformity of the Pelvis. By Dr. Brochin. (*Gazette des Hôpitaux*, Jan. 26.)  
Paracentesis Abdominalis performed 354 times in a Case of Ovarian Cyst. By Dr. Porro. (*Annali Universali di Medicina e Chirurgia*, Jan.)  
Case of Ovariectomy during Subacute Peritonitis and Suppuration of the Ovary following Aspiration. By Dr. P. F. Mundé. (*American Journal of Medical Sciences*, Jan.)  
Bromide of Potassium in the Uncontrollable Vomiting of Pregnancy. By Dr. S. C. Busby. (*Ibid.*)  
Purulent Pelvic Effusion Opening Spontaneously into the Vagina. By Dr. W. H. Haynes. (*Ibid.*)  
A Contribution to Ovariotomy. By Dr. M. Schüller. (*Berliner Klin. Wochenschrift*, Jan. 14.)  
A Case of Cæsarean Section followed by Extirpation of the Uterus. By Dr. Späth. (*Wiener Medizin. Wochenschrift*, Jan. 28, Feb. 5.)

### OPHTHALMOLOGY AND OTOLOGY.

**BADAL ON DISEASES OF THE LACHRYMAL PASSAGES.**—In a communication made to the Société de Biologie in November 1876 (*Annales d'Oculistique*, July-August 1877), Dr. Badal has expressed the opinion that errors of refraction, and especially hypermetropia, play a prominent part in the development of diseases of the lachrymal passages; and he now thinks that he has collected and tabulated facts which, although insufficient to furnish reliable statistics, nevertheless tend to show the intimate relationship, as cause and effect, which exists between the two conditions. His opinion is based upon the observation of one hundred and sixty-five cases of lachrymal disorder, in eighty-seven of which, or about 53 per cent., there existed some anomaly of refraction or of accommodation, without any

other disease of the eyeball or of its appendages. Thus, hypermetropia was equal in the two eyes in 40 per cent.; presbyopia in 5 per cent.; anisometropia, difference of refraction, in 4 per cent.; astigmatism, in 2 per cent.; myopia, equal in the two eyes, in 2 per cent.

Dr. Badal finds one case of lachrymal disorder in every five cases of hypermetropia, but only one in every twenty cases of myopia; in nearly every instance, however, these were complicated with astigmatism, or with unequal refraction in the two eyes. A certain number of lachrymal disorders are to be met with in eyes which are emmetropic; these, according to Dr. Badal, are due to fatigue of the ciliary muscles, and this is not surprising when we bear in mind the congestion of the surrounding tissues which often results from prolonged exercise of accommodation; it is to be noted, moreover, that in cases of myopia, in which accommodation is not actively employed, diseases of the lachrymal passages are very rarely met with. And if it be asked how it happens that the connection between these disorders as cause and effect has so long escaped observation, Dr. Badal would reply that optometry is at the present time more restricted than the use of the ophthalmoscope; that the hypermetropia in these cases is feeble in degree, and is not to be made manifest without careful investigation; and, lastly, that patients who suffer from lachrymal disorders very rarely complain of their eyesight; and surgeons have given their attention to those symptoms which are tangible and self-evident, and which have masked the defective function which was in reality the cause of all the mischief. In short, Dr. Badal considers that in more than half his cases the arrest of the free passage of the tears, and the consequent accidents of inflammation and structural changes within the ducts, have taken their origin in the congestion of the conjunctiva, which is itself the result of overwork imposed upon the ciliary muscle by some error in refraction.

**HUIDIEZ ON RETINITIS PIGMENTOSA WITHOUT ANY PIGMENT VISIBLE WITH THE OPHTHALMOSCOPE.**—Cases of this nature, constituting one of the most curious points in the study of retinitis pigmentosa, are rare. Such have, however, been recorded by MM. Galezowski, Landolt, and Maurice Perrin. That which is here related by Professor Huidiez (*Annales d'Oculistique*, November-December 1877) presented the same remarkable histological changes as did that of M. Perrin (*Annales d'Oculistique*, 1875). Mlle. V., aged eight years, had suffered, according to her parents, from hemeralopia from her earliest infancy. Her grandparents on her mother's side were first cousins, and a first cousin of her maternal grandmother, aged fifty-five, whose parents were cousins, had also been afflicted with hemeralopia all her life. The little patient was very intelligent; her hearing and her pronunciation were also perfect. The visual defect must, therefore, be ascribed to consanguinity in accordance with the opinion of Von Gräfe, and not to idiocy or to deaf-mutism, as suggested by Liebreich.

The hemeralopia was very marked. The field of vision was considerably narrowed, and to an equal extent in the two eyes. Central vision was good, as also the perception of colours in the same region; and she could read No. 3 of Wecker's metrical types fluently.

With the ophthalmoscope there was a slight haziness of the retina around the disc, as also around the



entire peripheral region. The macula lutea was normal. There was no trace of pigmentation of the retina whatever.

In all probability the conditions of the retina resembled those recorded in M. Perrin's case, and which are thus described. "The colouring matter had no existence along the track of the vessels as in the cases of retinitis pigmentosa of Landolt; it is, on the contrary, localised in the external granular layers of the retina. . . . The nerve-fibres are atrophied, but the fibres of Müller are unaffected; the ganglionic cells are intact, as are the two layers of granules. Immediately on the outside of these, however, there appear pigmented masses of cells containing from eight to ten cells in each; fine molecules of pigment are here and there lodged in the interior of the granules themselves." In no portion of the retina was any pigment found in the neighbourhood of the vessels, so that its presence elsewhere could not be ascertained by the ophthalmoscope, hidden as it was too by the infiltration of the anterior layers.

In the present instance, the diminution of the field of vision indicated that the pigmentation, assuming its existence, was extensive. The deposit does not in these cases, as in the typical forms of the affection, assume the stellate appearance which is, in fact, due to the ramification of the blood-vessels with their sheaths; for as yet its appearance has only been described amongst the external layers of the retina which have no blood-vessels. The colouring matter appears to be derived from the choroidal epithelium, and is absorbed by the rods and cones and by the external granules, all of which become blended together, and form irregular masses in which the pigmentation is well marked, but not radiating or stellate in its arrangement. BOWATER J. VERNON.

COURSSEMENT ON ANTERIOR CHOROIDITIS.—In an inaugural thesis (Paris, 1877), M. Courssement arrives at the following conclusions. 1. The anterior segment only of the choroid can be attacked by all the pathological processes which are observed in other parts of the membrane. 2. Anterior choroiditis may, under the different forms which it takes, be sometimes sudden, sometimes slow, in its progress, without immediate alteration of the centre of the eye; in spite of the situation of the anatomical lesions, all degrees of diminution of the vesical faculty are observed. 4. Primary lesions of the vascular system, deficient nutrition of this region, the irritation to which it is exposed, are the principal causes of the disease. 5. The physician should always be reserved in his prognosis.

The treatment which M. Courssement recommends consists of antiphlogistic measures, bleeding, rest of the apparatus of accommodation, to be obtained by atropia, and tonics in the case of weak subjects. He rejects altogether the action of syphilis, which is often regarded as the cause of choroiditis.

LANDOUZY ON CEREBRAL BLEPHAROPTOSIS.—Dr. Landouzy has published in the *Archives Générales de Médecine* a note on cerebral blepharoptosis. Ten observations of paralysis of the levator palpebræ superioris are given. In all, the paralysis offers the special characteristic of being crossed, as in hemiplegia, and limited, in the third pair, to the portion supplying the levator. From the examination of these facts the author concludes that—1. The origin of the motor centre of the eyelid must be looked for in a posterior region of the

parietal lobe; 2. This origin is not in immediate contact with the motor centre for the limbs; 3. Amongst the nervous bundles which constitute by their union the third pair, those alone destined to the innervation of the levator palpebræ superioris seem to have connection with the hemispheres. The cerebral paralysis of the third pair being never complete, the origin of the different fibres of the motor oculi is distinct for the branch supplying the levator, those going to the other muscles of the eye.

DICKINSON ON THE DEVELOPMENT OF CONNECTIVE TISSUE IN THE VITREOUS HUMOUR.—Dr. William Dickinson, of St. Louis, in the *St. Louis Medical and Surgical Journal* for January 1878, describes a case in which hyalitis occurred from exposure to cold and damp, and was followed by the development of connective tissue in the substance of the vitreous tumour.

The patient, a young man aged 20, after frequent exposure to wet and cold, was thrown from his horse into a creek and remained the whole day in his wet clothes. A fortnight after this, while lying on his back on the sun reading, he found that his vision became dull; and after bringing his book nearer and nearer, he was at length compelled to give up reading. After this he was unable to judge the true distance of objects, and he complained of the appearance of smoke before his eyes.

A month afterwards he was first seen by Dr. Dickinson, who ascertained by the ophthalmoscope that the vitreous body was hazy. After many changes in the condition of the vitreous humour and of his power of vision, which varied from a clouded field with large scotomata to fairly good vision, the patient, after two years, exhibited the following ophthalmoscopic appearances. There were two triangular masses of connective tissue in the vitreous humour. The apices of these masses were near the centre of the vitreous humour, and their bases were attached by neoplastic filaments to the retina. The masses were agglutinated to each other, and numerous similar but smaller new formations were seen scattered about in the vitreous humour.

B. T. LOWNE.

GALEZOWSKI ON HYSTERICAL MYOSIS AND MYOPIA.—M. Galezowski (*Progrès Méd.*, January 19) records a remarkable case of hysterical myosis, with myopia, from spasm of the muscle of accommodation. All remedies have hitherto proved unavailing, including the metallo-therapeusis now fashionable in Paris. The case, he believes, is quite unique.

R. SAUNDBY, M.D.

BERNDGEN ON ABSCESS OF THE BRAIN AND TYMPANIC CAVITY.—Dr. Berndgen of Münster places this case on record in No. 3 of the *Monatsschrift für Ohrenheilkunde*, on account of the rarity of the passage of an inflammatory process from the brain to the tympanic cavity compared with the passage of such in the opposite direction. From the course of the affection and the *post mortem* examination, there seems little doubt that this was the case.

W. LAIDLAW PURVES.

WOIMAND AND DUPLAY ON MASTOID ABSCESSES AND THEIR TREATMENT.—These abscesses are due to two special causes; inflammation of the periotum of the external auditory canal, propagated by continuity of tissue as far as the level of the mastoid apophysis; and inflammation of the mastoid cells,

which reaches the face of the bone, either by continuity of tissue or by perforation of the external lamella of the apophysis. These abscesses always owe their origin to purulent otitis of the middle ear or purulent catarrh of the membrana tympani. Dr. Woimand gives an elaborate description of the progress and diagnosis of this affection (*Thèse de Paris*, 1877). The treatment which, according to M. Duplay, should be applied to it, is as follows. In osteo-periostitis, leeches and antiphlogistics may be used; they have been successful in M. Duplay's hands. But more frequently it is necessary to make rapidly a long vertical incision, about two-fifths of an inch behind the ear, down to the bone. We must not wait for suppuration, as we thus have a *débridement* of the periosteum, which prevents the inflammation. In the case of abscess of the mastoid cells we must, as a rule, trephine. To accomplish this, after having made the incision above mentioned, the periosteum is laid bare, and a small crown of the trephine is applied on the precise point of intersection of the vertical line of incision and of a horizontal line touching the upper septum of the auditory canal in front. A horizontal direction, slightly forward and from without inwards, is given to the instrument in a parallel direction to that of the external auditory canal. The membrana tympani must be perforated, if it have not been destroyed. It is then easy, by these openings, to wash out the middle ear and the cells with a stream of water.

#### RECENT PAPERS.

- A Contribution to the Study of Subconjunctival Serous Cysts. By Dr. C. H. Bull. (*American Journal of Medical Sciences*, Jan.)  
 Acute Inflammation of the Middle Ear: Destruction and Reproduction of the Entire Membrana Tympani. By Dr. L. Connor. (*Ibid.*)  
 Diabetic Diseases of the Eye. By Dr. H. Jany. (*Berliner Klin. Wochenschrift*, Jan. 28.)  
 Hysterical Contraction of the Iris and of the Muscle of Accommodation, with Consecutive Myopia. By Dr. Galezowski. (*Le Progrès Médical*, Jan. 19.)  
 On the Numbering of Spectacle Lenses. By Dr. E. Javal. (*Annales d'Oculistique*, Nov., Dec., 1877.)  
 A Review of Medical Ophthalmoscopy and Cerebroscopy for 1877. By M. Bouchut. (*Gazette des Hôpitaux*, Jan. 2 and 3.)  
 Case of a Curious Variety of Ocular Illusion consecutive on Glaucoma. By Dr. Noel Gueneau de Mussy. (*Récueil d'Ophthalmologie*, Jan. 1878.)

#### PSYCHOLOGY.

**LAEHR ON THE PERSPIRATION OF THE INSANE.**  
 —This paper, which was read before the Psychiatrischer Verein in Berlin, is reported in the *Allgemeine Zeitschrift für Psychiatrie* (Band 34, Heft 3).

There was a time when a peculiar secretion from the skin was regarded as a pathognomonic sign of insanity. Medical supervision, with the general improvement in asylums and their cleanliness, has rendered this evil smell a thing of the past. It appears, however, that a grain of truth lay at the root of the old supposition, for the central nervous system cannot be without influence on the various secretions, though the extent and manner of it have not been sufficiently investigated.

In Halle, Dr. Laehr had under his care a medical man suffering from incurable delusional insanity, whose perspiration caused a most penetrating smell; this was always worst when the patient's mental con-

dition was most unfavourable. His insanity saved him from annoyance by the smell, for it was to him a delicious odour which he could not prize too highly. Out of 787 patients in his asylum, Dr. Laehr has only observed a disagreeable odour due solely to the perspiration in six cases; all of them were women; some may have been overlooked before the author's attention was as much directed to the subject as of late.

1. A lady had been treated twice for mania before marriage, and since for puerperal mania, from which she had also recovered; as long as the maniacal attacks were present, her perspiration had a disagreeable smell.

2. A young lady suffering from *folie circulaire* had always, at the time of menstruation, a most disagreeable odour due to her perspiration, and a much more offensive one during every attack of excitement, even when the menses were not present.

3. A lady had always a foul-smelling secretion from the skin, but when she became restless from increase in her hallucinations, it was much more strongly noticeable. She had been under treatment for years.

4. In another case of *folie circulaire*, the patient, when restless, had always a disagreeable odour due to her perspiration, and it was increased at the menstrual period.

5. A lady, who had been in the asylum for years, and had appeared relatively well, except at times when she had not the power to suppress her hallucinations, was subject to disagreeable-smelling perspiration only at, and just before, these times.

6. A young lady, who for many months suffered from mania with delusions, but for the last half year was much better, if not recovered, had a very unpleasant odour during the whole time of her excitement; it had since disappeared.

Of the cases observed only one was curable; but the disagreeable odour due to the perspiration was only noticed on psychic excitement. This calls to mind the influence of mania on the secretion of saliva; the author cites one case of a lady whose saliva caused a penetrating smell which filled the room, although her mouth was frequently syringed out. In none of the above cases was the perspiration excessive in amount.

CHAS. S. W. COBBOLD, M.D.

#### RECENT PAPERS.

- The Dual Character of Psychic Phenomena. By M. Delasiauve. (*Le Progrès Médical*, Dec. 22.)  
 The Mental Condition of Certain Diabetic Patients. By M. Legrand du Saulle. (*Gazette des Hôpitaux*, Dec. 22.)  
 General Foundations for the Treatment of Psychoses. By Dr. Wille. (*Berliner Klin. Wochenschrift*, Jan. 21.)  
 On the Nature of the Muscular Troubles in the General Paralysis of the Insane. By Dr. J. Christian. (*Revue Médicale de l'Est*, Jan. 1, 1878.)

#### TOXICOLOGY.

**MURRAY ON POISONING WITH THE ROOT OF OLEANDER (NERIUM OLEANDER).**—A case of this rare form of poisoning occurred to Dr. T. Murray of Ajmere (*Indian Medical Gazette*, 1877). R. D., aged 35, was brought to the Dispensary at 4 P.M. in a state of complete insensibility. He had made a strong infusion of four ounces of the root of the oleander, and had taken it for the cure of Guinea-



worm in his left leg. This was at 8 P.M. He complained of a bitter taste in his mouth, and in a short time he was seized with vomiting and severe cramps in the abdomen and extremities. Between ten and eleven o'clock he became insensible, and vomited twice while in that state. He was taken to the Dispensary, and the symptoms then presented were insensibility; cold, clammy skin; weak, thready pulse; stiffness of the muscles of the jaws; eyes turned up; the fingers rigid, and the thumbs turned into the palms. Turpentine injections and liniments, with stimulant mixtures, were employed, but without any beneficial results. There were convulsive spasms, with cold and clammy skin, and the pulse was barely perceptible. He continued insensible, and died on the fifth day after taking the poison.

[We seldom hear of a case of poisoning by this vegetable in the human subject. That it is an active poison in the root, bark, and leaves, was long since demonstrated by the experiments of Orfila. It has no local action, but, when absorbed, it operates rapidly and intensely on the brain and spinal marrow, producing, as in the above case, insensibility and convulsions. Vomiting and spasms of the stomach, as well as spasmodic contraction of the voluntary muscles, with tetanic rigidity and dilated pupils, have been noticed among the symptoms. The plant operates like laburnum. It owes its poisonous properties to the presence of a resinous looking principle of a yellowish colour and intensely bitter taste, called *oleandrin*. According to Pelikan, this operates in very small doses as a cardiac poison. Even the six-hundredth part of a grain is sufficient to cause symptoms of uneasiness.—*Rep.*]

ALFRED S. TAYLOR, M.D.

**SANDES ON THE TREATMENT OF STRYCHNIA-POISONING.**—A case in which a man took "several grains", "over two", of strychnia with suicidal intention, is reported by Dr. Sandes in the *Philadelphia Medical Times*, October 13. There were general convulsions with intervals of relaxation. The treatment successfully adopted was, after giving an emetic, the administration of the vapour of ether, and bromide of potassium in large doses by the rectum and mouth. With the first two injections, at four intervals, of a drachm-and-a-half and an ounce respectively of the bromide, 80 and 90 grains of chloral-hydrate were also given; and in another hour two drachms of the bromide were injected. Dr. Sandes remarks that nothing could be more happy than the effects of ether in this case, but he is disposed to give it only a secondary place as a curative agent. It relaxed the spasm sufficiently to allow the administration of the remedies, but the bromide of potassium, as recommended by Dr. H. C. Wood, was evidently the true physiological remedy. Recovery was prompt.

## REPORTS OF FOREIGN SOCIETIES.

### IMPERIAL ROYAL MEDICAL SOCIETY OF VIENNA.

January 4, 1878. *Dermoid Ovarian Cyst*.—Dr. von Dumreicher made a further communication on the case of dermoid ovarian cyst reported at the meeting of December 14 (see LONDON MEDICAL

RECORD for January, page 42), and showed the patient. The operation, which was done on December 13, was performed in a room of which the temperature was 81.5° Fahr. The carbolised spray was not used, but warm moist sponges were continually applied to the wound. The pedicle, which was twisted four times on its axis, was tied, divided, and fastened to the wound by sutures. On the second day the temperature rose to 100.4° Fahr., but, with this exception, the progress of the case was unattended by febrile reaction. The patient was able to leave her bed on the twelfth day, and on the eighteenth day was discharged cured. On the tenth day after the removal of the second ovary, the catamenia appeared, and lasted five days.

*On Grey Hair, White Hair, and Alopecia.*—Dr. Wertheim read a paper on this subject. He said that the anatomy of hair that had become white was already well known, inasmuch as, in Simon's Treatise on Diseases of the Skin, it was stated that white hair only differed from that which was coloured, in the complete absence of pigment in the papilla and shaft; but nothing was said anywhere in literature as to the manner in which this condition was produced. Dr. Wertheim had examined the hair of persons aged between fifty and seventy, and had studied its texture in longitudinal and transverse sections, from the papilla to the shaft. In transverse sections the papillæ were found varying in colour from black, dark red, blood-red, reddish yellow, and white. This was the series followed by Nature in the change from coloured hair to white. Dr. Wertheim exhibited microscopical preparations showing that, when the papilla was red or reddish, the hair belonging to it had already lost its normal colour and become pale; and that the colourless papillæ always belonged to white hairs. He had also studied the process of falling off of the hair. Differing from the opinion recently expressed by Professor Stieda, of Dorpat, and Dr. Unna, of Strasburg, he arrived at the conclusion that falling off of the hair takes place in the following way. The pigment becomes detached from the knob which embraces the papilla, and then, by the contraction of the follicle in a way which Dr. Wertheim could not explain, the hair is pushed out.

*Hallucinations, considered from a Clinical Point of View.*—Dr. Meynert began a paper on this subject by giving a short historical sketch of the development of modern opinions on melancholia, mania, and chronic mania (*Verrücktheit*). He showed that melancholia and mania were to be regarded as forms of disease, and not, as Morel thought, analogous to the hot and cold stages of fever. Observation of the course of melancholia, and of the presence of an increase, decrease, and termination of the melancholic condition, would show whether it would end in recovery or dementia. An equally typical process of disease was observed in mania, the opposite of melancholia; and both could, during a patient's life, constantly alternate one with the other. These forms, however, notwithstanding the similarity of the symptoms, should not be regarded as true mania and melancholia, since the typical conditions here indicated exhaustion and recovery of the functions of the vascular centre; and the features of the disease were also essentially different from those of the first-named diseases. He said that Griesinger's opinion, which he himself had finally relinquished, that the so-called chronic derangement (*Chronische Verrücktheit*) originated in melancholia and mania, was untenable; and that, even through a whole life, this condition, unlike the so-called primary psychoses, did

not pass into imbecility. As regarded true chronic mania (*Verrücktheit*), it might consist of an affection limited to only a small number of delusive ideas, and the patient might possess a perfectly clear opinion on all other subjects of thought. The logical apparatus in the anterior cerebral lobes acted correctly, but was inadequate to suppress certain strong wanderings of thought, involving delusive notions. Dr. Meynert compared this condition to that of a watch, the mechanism of which was intact; but on one of the figures on the face there was a projection, by which the hand was always stopped, although the interior works were uninjured. It might hence be said that in chronic mania the logical apparatus acted, but not with the intensity required to be able to suppress delusive ideas. The difficulty of explaining this phenomena was essentially diminished by considering at the same time the connection of chronic mania with hypochondriac sensations, and the origin of hallucinations. Dr. Meynert showed that the latter did not arise from a condition of irritation in the brain, but, on the contrary, were present in debilitated conditions of the organ. He asserted also that the sensorial illusions of the hemispheres arose from stimulation of a centre connected with the sensorial perceptions, not necessarily of the organ of sense, since blind persons might have hallucinations. The development of hypochondriac sensations, and of the numerous reflex acts of hysterical patients had no origin in the abolition of a fundamental physiological function of the hemispheres—the inhibition of reflex actions. In the subjects of chronic mania, the inhibitory phenomena were limited, the reflex apparatus became hyperæsthetic, and, through the loss of inhibition, the nerve-tracts passing from the intestines or other parts, which usually gave only obscure impressions, became subject to neuralgic irritation, which was conveyed to the hemispheres. The hyperæsthesia in the conducting tracts of the sensorial perceptions, increased probably on the one hand by the abolition of the inhibitory process, and, on the other, by some peripheral irritation, produced stimulation of the hemispheres, which manifested itself in the form of sensorial perceptions—hallucinations. In conclusion, Dr. Meynert said that it would now be a mistake to suppose that the phenomena of irritation in certain psychoses were concurrent with certain processes, of which the anatomical character was partly known, going on in the hemispheres.

January 11. *Crural Aneurism*.—Dr. Neumann showed a patient whom he had treated a year previously for enlargement of the inguinal glands, consequent on a specific sore. Some days ago the man had come to him complaining that he had for some time noticed the development of a painful swelling in the left groin. On careful examination, no change was found in the inguinal glands, but behind them lay a tumour, which pulsated rhythmically. As the pulsations were arrested by compression of the femoral artery above the swelling, and a distinct systolic murmur was heard on auscultation, the case was at once diagnosed to be one of femoral aneurism.

*Traumatic Aneurism following Venesection*.—Dr. Weinlechner showed a man whose brachial artery had been wounded during venesection five weeks previously. An aneurism nearly as large as a fist had been formed. He also showed a preparation taken from a similar case, in which he had successfully treated the aneurism by operation ten years before the death of the individual. Dr. Kundrat had made an injection, which showed that a sufficient

collateral circulation had been established through the recurrent, ulnar, and radial arteries.

*Excision of Upper Jaw for Phosphorus-Necrosis*.—Dr. Sliva showed a man on whom Dr. Dittel had performed resection of the upper jaw on both sides, on account of phosphorus-necrosis. The operation was commenced under chloroform. The wound was dressed antiseptically; there was no fever, and the progress of the case was most favourable. The patient was now able to eat solid food, and his speech was quite intelligible.

*Cases of Disease of Muscular Motion*.—Dr. Mader showed a patient with paralysis of the serratus magnus and atrophy of the shoulder-muscles of the right side. He also showed a woman, aged 35, suffering from clonic contractions of the muscles of the neck (front and nape) and thorax, together with severe dyspnoea (eighty respirations in a minute). He attributed these symptoms to disease somewhere in the medulla oblongata.

*Epilepsy following Injury of the Head*.—Dr. Mader showed a man who, ten years ago, received an injury of the skull, which left a cicatrix adhering to the parietal bone. Soon afterwards he began to suffer from vertigo, and in 1873, after an attack of typhus, he had violent epileptic paroxysms, which returned at least once a month. The patient also complained of a feeling of pressure, proceeding from the cicatrix, unsteadiness of gait, and vertigo, which was especially intense when his body was shaken. Subsequently he also sometimes had hallucinations and restless nights. Dr. Mader applied the faradic current to the cicatrix, after which the unpleasant sensation above described disappeared; the nocturnal restlessness, hallucinations, and epileptic attacks ceased nine weeks before the case was reported.—Dr. Leidesdorf said that this patient had twice been under treatment in the psychiatric clinic. On the first occasion, Dr. Meynert loosened the cicatrix; this was followed by some improvement. The second time, Dr. Leidesdorf had the man under his care, and proposed to trephine, after showing the man to the Society, and obtaining the opinion of the members. Circumstances, however, prevented this intention from being carried into effect. He did not believe that the faradisation was to be credited with the cessation of the epileptic attacks; as on a former occasion, without any other treatment than bodily rest, the patient had had no attacks for four or five months.

*Seaweed in a Lunatic's Stomach*.—Dr. Leidesdorf showed the contents of the stomach taken from an insane patient, who had lately died with symptoms of Bright's disease. He had destroyed and devoured everything that he could—linen, dressings, bed-clothes, etc., and at last was put to lie on seaweed. He ate this; and, at the necropsy, his stomach was found filled with it. He had not suffered at all from disorder of digestion during life.

January 18. *Congenital Defect of the Limbs*.—Dr. Weinlechner showed a man, aged 27, the subject of defective development of both upper and lower limbs. His right arm was represented by a stump, furnished with muscles, to which he could attach various artificial apparatus. In other respects the man was well and strongly formed; he had been married several years, and was the father of two children. In commenting on the case, Dr. Weinlechner said that many cases of deformity of this kind were, according to prevailing views, to be attributed to arrest of development; but, in other cases, as had been shown by other authors, and he himself had observed, the total or partial want of limbs was due evidently



to intra-uterine constriction by the umbilical cord or by amniotic bands.

*Foreign Body in the Œsophagus.*—Dr. Nikoladoni showed a foreign body taken from a child a year and nine months old, who was admitted on January 9 under Dr. von Dumreicher's care, with the statement that it had swallowed a metal button five days before, and, since that time, had been able to swallow only small quantities of water or milk, and immediately vomited everything that it took. The Œsophagus was explored with a bougie as thick as a little finger. The instrument passed easily to about two inches below the cricoid cartilage, and was there arrested. A much smaller bougie went beyond the obstruction, and entered the stomach. In passing, it gave the sensation of rubbing against a hard metallic edge; and, when it was withdrawn, marks indicating this were seen on it. Attempts at extraction with the forceps, coin-catcher, and Œsophageal hook having failed, Dr. von Dumreicher performed Œsophagotomy, but could not, in spite of careful search, find the foreign body. The child died next day from pneumonia, signs of which were found in the lower lobe of each lung. In the Œsophagus there was a longitudinal opening, leading into a cavity filled with pus, at the bottom of which the foreign substance was found. It was a glass button, with a sharp metallic border, about one inch in diameter. A little above this slit in the Œsophagus was the wound made in the operation. There was also extensive suppurative mediastinitis. Dr. Nikoladoni was of opinion that in such cases much time should not be spent in attempts at extracting the foreign body, but that Œsophagotomy should be performed early. Attempts at extraction might easily push the foreign body further down. The false passage was apparently made in an endeavour to remove the button some days before the child was admitted to the hospital.

*Cæsarean Section and Removal of Uterus in a Case of Osteomalacia.*—Dr. Späth described a case of osteomalacia, in which he had successfully performed Cæsarean section, with extirpation of the uterus. The patient was a woman aged 40, in her tenth pregnancy. She had had five labours at full term; had aborted three times; and the ninth labour was completed by perforation of the child's skull. She had suffered from osteomalacia for five years, and attributed the disease to the destitute circumstances in which she was. On May 29 she was admitted, while pregnant, under Dr. Späth, on account of osteomalacia. She was much emaciated, and her skin was pale; she had bronchial catarrh, the urine contained much albumen, and there was considerable œdema of the lower limbs. She also complained of pain in the loins, apparently due to the osteomalacia. Careful examination showed that the pelvis was greatly narrowed, and that the Cæsarean operation was absolutely indicated. As labour would not be due for some days, Dr. Späth had an opportunity of using means to improve the patient's strength. She was put in a separate room, and her nurses were instructed to give notice as soon as labour-pains set in. On reflection, Dr. Späth came to the conclusion that in this case the preferable mode of proceeding would be to perform the Cæsarean section under Lister's antiseptic plan; and, if the uterus did not completely contract, and there were consequently reason for fearing hæmorrhage into the peritoneal cavity, to totally extirpate this organ. He was led to this conclusion, on the one hand, by remembering that every case of Cæsarean section performed in the Vienna Lying-in Hospital during the last century had proved

fatal, either from peritonitis or from violent secondary hæmorrhage; and, on the other hand, by the successful results of extirpation of the uterus, obtained by Péan of Paris, and Porro of Padua. On June 2, in the evening, labour-pains set in; and at 8.30 P.M. the operation was performed under the carbolic spray, in the presence and with the assistance of Drs. Karl Braun and Weinlechner. An incision was made in the linea alba below the umbilicus, the uterus was laid open, and a living foetus was removed without difficulty. The commencement of energetic uterine contraction was now waited for; an endeavour to promote it had been made by injecting ergotine previously to the operation. As, however, the contractions gradually diminished, and the hæmorrhage from the uterus increased, and could not be arrested by the application of sponges dipped in iced water, the removal of the uterus was judged necessary. The chain of the écraseur having been fastened round the uterus near the neck, the organ was lifted out of the wound, and Dr. Späth divided, by free cuts with a scalpel, the body from the cervix. The abdominal cavity was carefully cleansed, the wound was united, and the pedicle of the uterus was fastened to the lower angle of the wound. The whole operation occupied scarcely an hour. The patient soon came to herself, and complained little of pain. The subsequent progress of the case was unexpectedly favourable; the highest temperature which was observed was 38.6 cent. (101.48° Fahr.) The wound in the abdominal wall healed rapidly, leaving only a fistulous opening leading to the neck of the uterus. The albuminuria and œdema of the limbs disappeared, the patient's condition was improved by the use of champagne, and she complained less of the bronchial catarrh. The uterine pedicle was detached on the tenth day. On the thirty-eighth day she sat up for the first time, and, eleven days later, was moved to another room, and walked without help into the garden. On September 18 she was discharged cured, with instruction to report herself every week. In October the fistulous opening completely closed. Dr. Späth showed the woman, who appeared to be in perfect health and good condition. She had had no further indication of the osteomalacia. Dr. Späth referred also to a second case in which he had operated in a similar way last September. The patient, however, had symptoms of septicæmia when she was admitted to the lying-in hospital, and died after the operation.

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#### ACADEMY OF MEDICINE IN PARIS.

December 18. *Preservation of the Brain.*—M. Broca read a note by M. Oré on his method of preparing the brain so as to retain its form, volume, and colour. The whole secret of the preparation consists in saturating the cerebral substance throughout its thickness with alcohol of 90 degrees of strength, which has the property of both hardening and preserving the brain. The alcohol is then imprisoned in the brain-substance by four or five layers of white India-rubber varnish, which, resisting evaporation, preserves the volume of the brain without causing any change in its colour. In the course of preparation, pieces of cotton are placed in the fissures to separate the convolutions, and to avoid the falling in of the brain; small and very flexible India-rubber pear-shaped flasks filled with air are introduced into the ventricles. The brain thus prepared is submitted to the galvano-plastic process; the

organ, completely metallised, may be preserved for any length of time. If it be wished only to obtain the convex surface of the hemispheres, there is no difficulty in making two large openings at their base, and removing the brain itself; there then remains a metallic mould which accurately represents the anterior surface of the organ.

In connexion with this subject, M. Personne laid before the Academy some brains which had been preserved for a considerable length of time by hydrate of chloral. They were as hard as wood, and their unchangeableness seemed a settled fact. They were about the same size as M. Oré's specimens, and likewise showed all the convolutions with the greatest exactness.

*Polydactylism.*—M. Broca gave an account of a memoir by M. Lenglet, a veterinary surgeon at Arras, on hereditary polydactylism. A family presented a remarkable example of it. 1. The great-grandfather had two great toes on each foot, and two thumbs on each hand, united as far as the last phalangeal articulation, free in the rest of their extent, and each having a nail. 2. The great-grandfather's hands and feet were formed in the ordinary manner. 3. The grandfather had six toes on the feet; the ring and middle fingers on both hands were united. 4. The father had six toes on each foot, and six fingers on each hand. 5. Of six children: *a*, one daughter had six fingers on each hand, and six toes on each foot (she had five children, of which four were properly formed; but the fifth, the eldest, had two thumbs on each hand, fixed and turned round); *b*, another girl had two thumbs fastened together on the right hand, and on the left hand the middle and ring fingers fastened together, like her grandfather. The four other children were properly formed. This succession of facts may be consulted with regard to the determination of the relative influence of the father and the mother in the conformation of the product of conception.

January 28. *Treatment of Aneurism of the Aorta.*—M. Gueneau de Mussy laid before the Academy, in the name of Dr. Guido Baccelli, a memoir on a plan of operation applicable to the treatment of aneurism of the aorta. The writer reserved its employment for cases in which the tumour is sacciform, communicates with the aorta by a narrow aperture, and projects outwardly, raising the chest-wall. In order to obtain the coagulation of the blood circulating in the sac and the consecutive retraction of the latter, he introduces a trocar about a millimetre and a half in thickness, parallel to one of the great horizontal diameters of the tumour, and nearly in the middle of its vertical diameter. By the help of this trocar, he introduces into the sac one or even several watch-springs about a millimetre in length. These springs become the centre of coagula, which, becoming agglomerated, are intended to interrupt the communication between the sac and the vessel; after some time they become oxidised, break into fragments, and probably end by disappearing for the most part in the midst of the fibrinous clots. The operation was tried twice unsuccessfully; the failure, however, seemed due to conditions foreign to the plan itself, and in any case these two cases showed (1) that the introduction of the trocar did not cause any serious hæmorrhage; (2) that the presence of the foreign body in the aneurismal sac did not bring on any manifestation of congestive irritation in the internal membrane of the sac.

[This plan is not altogether new. Dr. Murchison and the late Mr. C. H. Moore treated a case of

aneurism by introduction of a coil of iron wire in 1864; and since that time, we believe, watch-spring has been used for the same purpose. The result, however, has not been such as to encourage English surgeons to follow this method of treatment.]

## ACADEMY OF SCIENCES IN PARIS.

December 10, 1877. *Diphtheritic Paralysis.*—M. Déjérine presented a paper on the lesions of the nervous system in five cases of diphtheritic paralysis. The lesions noted were those of common myelitis, both parenchymatous and interstitial, affecting the grey substance only; the lateral columns, both exterior and posterior, did not show any change. The lesions were in direct proportion to the duration and the intensity of the paralysis. All the lesions were observed in the anterior roots, whilst the posterior roots showed no anomalous appearances.

December 17. *Sensibility of the Pericardium.*—MM. Bochefontaine and Bourceret presented a paper on the sensibility of the pericardium in the normal and in the pathological condition. The experiments of the writers were based on the fact that stimulation of the sensory nerves augments the intra-arterial pressure, and produces dilatation of the pupil. Experiments made on the dog showed that the pericardium possesses manifest sensibility, greater on the external than on the internal surface. An inflamed pericardium is at least sensitive on the external surface and in its thickness.

December 24. *Localised Meningo-Encephalitis.*—M. Vulpian presented a report of experiments made in his laboratory by MM. Bochefontaine and Viel, showing that meningo-encephalitis of the central convexity determines different symptoms according to the part affected. Meningitic affections betray themselves, we know, by the most varied phenomena—pain, somnolence, convulsions, disturbances of special sense, contractions, paralyses, etc.; but nowhere is this better marked than in progressive general paralysis of the insane, in which the lesion is well known to be a chronic diffuse meningo-encephalitis, and it has already been anticipated that this variation may be owing to the seat of the lesions, a view which clinically has found some support. The authors thought it would be useful to endeavour, by experiment, to test these theories, account being taken of the new physiological knowledge of the functions of the grey matter of the convolutions. The experimental procedure which they decided to employ was to cauterise the brain with solid nitrate of silver, after the animals had been sufficiently anaesthetised by the intravenous injection of chloral-hydrate. They operated in this manner on ten dogs, in which it was proved that no wound of the brain had been caused by the instrument, and that the alterations of the organ were solely where it had been touched by the nitrate of silver. In seven of these the cauterised parts were the sigmoid gyrus (Dog's brain: see Ferrier, *Functions of Brain*, p. 145) and the parts immediately behind it—that is to say, the anterior two-thirds of the cerebral hemispheres. In the other three, the cauterisation had affected the posterior third of this surface of the brain. In the first series the animals presented, three or four hours after the operation, diverse disturbances which, in one case, began by an abnormal attitude of the front paw in the side corresponding to the lesion. In every case ataxic movements of the opposite limbs were ob-



served, then paralytic feebleness in these limbs. The cutaneous muscles of the face and neck were always paralysed on the opposite side. At the same time, a considerable diminution or abolition of sensibility in certain parts was noticed, such as enfeeblement of the sense of sight or of hearing; the nasal mucous membrane, moreover, became insensible to different mechanical irritants; there were also epileptiform attacks, preceded and followed by delirious outbursts, just as is observed in epileptic mania; in addition, there were choreic phenomena. The epileptiform crises were always accompanied by copious salivation. All the animals, excepting one which recovered after having had epileptiform attacks with delirious outbursts, died exhausted by convulsions after they had become much thinner, although they ate willingly up to the last day. The other three dogs showed no cerebral trouble; they were killed after one month, and showed lesions on the posterior parts of the hemispheres similar to those on the anterior parts of the brains of the other series. These lesions consisted in an irritative inflammation of the grey matter of the convolutions, sometimes accompanied by softening, with or without ulceration, in the part touched by the nitrate of silver; sometimes the dura mater adhered to the grey matter; false membranes between the brain and dura mater were found twice; there was no meningitis beyond the points indicated. The conclusions arrived at were the following.

1. Cauterisation of the grey matter of the hemispheres by means of nitrate of silver, produced a meningo-encephalitis in a determined point at the will of the experimenter.
2. The inflammatory irritation thus produced determined various disturbances; paresis, convulsions, local anæsthesia, loss or dimness of sight and hearing, delirium, etc.
3. The anæsthesia, paralysis, convulsions, and disturbances of the sensory organs were on the side opposed to the lesion.
4. All these phenomena followed lesions of the grey matter of the anterior parts of the brain.
5. The motor symptoms corresponded to the inflammatory irritation of the so-called *motor centres* of the sigmoid gyrus and its neighbourhood.
6. The anæsthesia corresponded to a lesion of the parts just behind the sigmoid gyrus, at about the middle part of the superior and convex surface of the cerebral lobes.
7. Cauterisation of the posterior third of the surface of the convolutions gave no results in any case.
8. Cauterisation by the nitrate of silver produced no direct and immediate effect; the phenomena observed supervened three or four days after the operation, and were the results of the inflammation resulting from it.

December 31. *The Semicircular Canals and the Muscles of the Eye.*—M. Claude Bernard presented a note by M. Cyon on the peripheric organs of the sense of space. In a previous paper, M. Cyon had demonstrated the intimate relations existing between the semicircular canals and the centres of innervation of the muscles of the eye. In the present paper he explained the physiological signification of these relations, and he drew the following conclusions.

1. The semicircular canals are the peripheric organs of the sense of space; that is to say, the sensations excited by irritation of the nerve-endings in the ampullæ of these canals serve to form our notions of the three dimensions of space. The sensations of each canal correspond to one of these dimensions.
2. By aid of these sensations there are formed in our brain representations of an ideal space, to which are referred all the perceptions of our other senses concerning the arrangement of the objects around us,

and the position of our own body amongst those objects.

3. The recognition of a special organ for the sense of space remarkably simplifies the discussion between the representatives of the two theories of binocular vision—the empirical theory of Helmholtz, and the nativist theory of M. E. Hering. It creates a neutral basis, on which these two views may be reconciled.
4. The physiological stimulation of the peripheric termination peculiar to the organ of the sense of space probably takes place mechanically by aid of the otoliths in the ampullæ. These otoliths are put into vibration by every active or passive movement of the head, and perhaps also by the aerial waves which the membrana tympani transmits to the fluid which fills the whole system of the semicircular canals.
5. The portio mollis of the seventh nerve therefore contains two nerves of sense altogether distinct, the auditory nerve and the nerve of space.
6. The central organ of the sense of space presides over the distribution and the graduation of the force of innervation, which may be communicated to the muscles for all the movements of the eye, the head, and the rest of the body.
7. The disturbances which occur after lesions of the semicircular canals are due—*a*, to a visual vertigo produced by the disagreement between the space seen and the ideal space; *b*, to the false notions which result as to the position of our body in space; *c*, to disorders of the distribution of the force of innervation to the muscles. M. Cyon promises very shortly to publish a further development of these conclusions, and the proofs which support them.

*Blood-Corpuscles in the Viviparous Vertebrata.*—A note by M. Hayem treated of the evolution of corpuscles in the blood of the higher animals (viviparous vertebrata). The conclusions of this paper were as follows.

1. The red corpuscles proceed from the more or less regular development of the small colourless, delicate, very variable elements which become modified very rapidly as soon as they leave the vessels.
2. These elements, named by the writer hæmatoplasts, pass through an intermediate phase (of which the study is facilitated by anæmia), in which they become perfect, grow, and acquire colour until they acquire, often before having attained their normal diameter, the characteristics of blood-corpuscles.

*Typhoid Blood.*—M. F. Feltz communicated some experiments, according to which there is during life a figurate ferment in human typhoid blood. These experiments showed that the living normal venous blood does not contain a ferment; that ammoniacal urine may be deprived of its ferment by filtration *in vacuo* through a thick layer of charcoal; that living typhoid blood holds in suspension cryptogamic germs, capable of vegetating in receivers containing pure air only.

January 7. *Formation of Blood-Fibrine.*—M. Hayem forwarded a note relating to formation of fibrine of the blood studied under the microscope. When a current of iodised serum is passed through a preparation of the coagulated blood of a frog, it is seen that the hæmaties arranged in rosettes round collections of hæmatoblasts are fixed in this situation by fine filaments springing from the centre of the rosettes, and forming prolongations of the modified hæmatoblasts. In the higher vertebrata, modifications of the same kind are noted. When the blood begins to coagulate, the network of filaments is hardly distinct; it then gradually becomes defined, in consequence of the progressive thickening of the fibrillæ by which it is constituted. When the blood

taken from a living subject is diluted with a sufficient quantity of iodised serum to prevent coagulation, the hæmatoblasts all remain nearly isolated, and are fixed in their normal form, but at the end of some hours they show small short prolongations, sometimes divided, which seem to have emanated from their substance. When the quantity of iodised serum used retards coagulation without preventing it, the hæmatoblasts change more slowly than in pure blood, and it is easier to follow their changes, and to see the production of the network of fibrine. In defibrinated blood, neither the hæmatoblasts nor the corpuscles and masses formed by these changed elements are found. The same is the case in blood taken from the dead body after *post mortem* coagulation. The totality of these facts shows that the phenomenon of the coagulation of the blood may originate in the physico-chemical actions which accompany the decomposition of one of the figurate elements of the blood, a decomposition which commences spontaneously so soon as that element is no longer in the conditions necessary to maintain its vitality. The hæmatoblasts, although they are destined to become adult red corpuscles, yet possess peculiar properties; and from this view they may be considered in some sort as a third species of figurate elements of the blood. It is a question whether these elements, in changing, act as a determining cause of coagulation. M. Hayem thought this a very probable hypothesis. In any case three factors might be imagined—1, a substance which exudes by exosmosis from the hæmatoblasts, and which, perhaps, represents paraglobuline; 2, the isolated or grouped corpuscles, formed by the hæmatoblasts in process of cadaveric changes, and which furnish a starting-point, perhaps merely accidental, for the network of fibrillæ. It may, in fact, be admitted that this network may be formed without the medium of these angular remains of elements. 3. A substance primarily dissolved in the plasma, which, either after simple modification in presence of the matter exuded by the hæmatoblasts, or after combination with this substance, furnishes by precipitation almost the whole of the fibrillar network. In intense anæmia, especially when it is connected with a cachectic condition, very large hæmatoblastic masses are seen; but as a rule the fibrinous network which springs from them is less rich and less distinct than in the normal condition. In acute maladies, and notably in inflammation, the hæmatoblasts have seemed to M. Hayem very abundant, and the masses formed by them larger than in the normal condition; but, contrary to what is observed in cachexia, the fibrine which emanates from them forms a rich network, with thick fibrillæ.

## REVIEWS.

*The Strumous Element in the Etiology of Joint-Disease.* By V. P. GIBNEY, M.D. (Reprinted from the *New York Medical Journal*, July and August 1877.)

This memoir contains an analysis of 860 cases, accompanied by a series of tables, from which the author is led to believe that joint-disease is constitutional, and not simply the result of an injury.

After quoting definitions of so-called struma, showing it to be an inflammation of almost any part which reaches a certain stage and then passes

through a succession of degenerative changes, being characterised by slow progress, pertinacity, and the ease with which it is incited, he endeavours to make out which of the two theories—traumatism and non-traumatism—given as the cause of struma, is the more tenable.

At the outset, the author feels convinced that sex is not especially a predisposing cause, for out of 5,461 cases 2,553 were females. Age, however, is; for 84½ per cent. occurred before the age of fourteen, and 51½ per cent. before the fourth year.

In 596 cases of diseases of the spine, and of the hip, knee, and ankle-joints, 68 per cent. were clearly hereditary. Of these, in 30½ per cent., the disease was acquired from the father, in 32 per cent. from the mother, and in 6½ from both parents. After a careful analysis, it is concluded that "true chronic joint-disease cannot occur in a nonstrumous child"; the predisposing cause, however, is not necessarily a transmitted tubercular diathesis, but it is either hereditary and permanent, or acquired, and if acquired, either temporary or permanent. On the other hand, it cannot be affirmed that chronic joint-diseases ever cause struma, although they sometimes develop strumous diseases in other localities in an individual already predisposed. If, then, a strumous diathesis is at the base of all chronic joint-diseases, traumatism cannot be considered as the real cause, however often it may be the apparent one. Of the 860 cases there was a history of a fall in 359 of them, but in 72 per cent. of this number there was a family history of at least one hereditary disease; hence, with a few possible exceptions, the existence of a strumous element was evident.

If, then, the traumatic theory, as generally understood, is untenable, it is clear that in treating such cases something more must be attended to than the local lesions.

To those interested in the above questions we can warmly recommend this memoir, believing that much benefit will be derived from an attentive study of the carefully prepared tables above mentioned.

J. C. EWART, M.B.

*Publications from the Progrès Médical.* Paris: 1877.

Under this heading two excellent works have reached us from Paris. One, under the title *Conférences de Clinique Chirurgicale*, is a collection of clinical lectures delivered at the hospitals Saint Louis and Saint Antoine, by M. Duplay; the other, entitled *Leçons de Clinique Chirurgicale*, is a similar collection from the teaching of M. Trélat, of La Charité. These lectures have all appeared originally in the *Progrès Médical*, but are now grouped together, and published in two small volumes for greater convenience.

We are told in the preface that no order has been aimed at in the arrangement of the lectures; that they have been simply collected as they appeared, and carefully revised. Moreover, notes have been added to one or two where the history of a patient subsequent to the lecture required it.

Without altogether admitting the necessity for their republication, we are fully alive to the value of the discourses. Some of them are really models of what clinical lectures ought to be—practical, concise, and to the point, and learned without being prolix. Moreover, they are remarkably free from that painfully minute attention to trifles, which



frequently mars otherwise excellent work by the hands of Frenchmen. The first lecture by M. Duplay is as good an example of bedside exposition of a case for the instruction of students as could well be found. It is an analysis of an example of encysted hydrocele of the testis, coincident with an orchio-epididymitis, and takes first the pathogenesis, then the diagnosis, and lastly the treatment. This is followed by a lecture on the diagnosis of ulceration of the tongue, *à propos* of an interesting and rare case of tubercular disease of that organ. Again, there is a very good demonstration on the semeiological value of otorrhagia which is well worth the study of any student; indeed, many old practitioners would also read it with much profit. We need only notice one more lecture in this volume, namely, one on osteo-periostitis of the middle ear and mastoid cells, which displays a knowledge of the facts of aural surgery, which it would be well that many hospital surgeons in this country possessed. These four mentioned may be taken as samples of what the remaining eighteen would be.

What has been said of this volume will equally apply to the next, which is a collection of clinical lectures by M. Trélat. Among these we need only mention as particularly worthy of being studied one on a case of "epiphysary fracture of femur"; another on "cheloid growths"; and the last on the "diagnosis of tumours of the testicle," which is specially interesting.

ARTHUR E. BARKER.

## CORRESPONDENCE.

### NOTE ON THE TETRACHLORIDE OF CARBON.

It is somewhat strange that the notice of Dr. George Laffont's *experimental* researches on the anæsthetic action of tetrachloride of carbon is worded as if the experiment and conclusions were novel. More than ten years ago I assisted my father in experiments with that useful anæsthetic, and he found it so valuable that he strove to reintroduce it to the notice of the profession. It is apparently a safe anæsthetic, for I have often given it by inhalation, and have seen but seldom even any transient disagreeable effects, such as are not unfrequently seen with chloroform. Tetrachloride of carbon (or chlorocarbon) has the power of increasing—and not weakening, as M. Laffont supposes—the force and volume of the pulse; so that when, during the administration of chloroform, any depression of the pulse should manifest itself, the addition of a small quantity of chlorocarbon will suffice to restore the equilibrium. The inhalation is as easily managed and as rapidly given as chloroform, and I have constantly administered it without witnessing the stage of "tonic and clonic convulsions". The inhalation to only a slight degree of the tetrachloride of carbon is most serviceable for the relief of headaches arising from nervousness or fatigue, while in many instances headaches and neuralgic pains are at once relieved by outward application when chloroform cannot be used, owing to its blistering. M. Laffont seemed to have based his remarks on insufficient observations, and to have been unaware that the subject had been thoroughly investigated long ago.

HEYWOOD SMITH, M.D.

## NEW INVENTIONS.

### SYRUPUS FERRI DIALYSATI (PROBYN).

This preparation is one which is, on good grounds, in great favour in the profession. The iron is presented in a form closely approaching to that in which it is believed to be present in the blood. It is easily assimilated, and it does not produce constipation; it is therefore well suited for use in cases of weak digestion, where iron produces derangements. It has two agreeable qualities which prescribers will always appreciate; viz., it is pleasant to take, and it does not destroy the teeth. A specimen is forwarded to us by the makers, Messrs. Probyn & Co., of 55, Grosvenor Street, W.; and 7, Pall Mall East, S.W.

### MARTINDALE'S SPECIAL NOVELTIES.

Mr. Martindale, of New Cavendish Street, London, has forwarded us samples of some special novelties, including salicylate of iron, a valuable anti-arthritis tonic, of a purplish-brown colour, only slightly soluble in water, given in doses from 3 to 10 grains or more, conveniently administered in the form of electuary, or in pills of from 3 to 4 grains each; sulphide of calcium pilules for patients suffering from abscesses, boils, indolent ulcers, scrofulous and tuberculous glands. Another article is oleanodyne, which is a combination of aconitia, atropia, morphia, and veratria, with oleic acid; it is quickly absorbed, and forms a strong liniment, which can be diluted with rectified spirit or oils, but is not so compatible with compound camphor or soap liniment. He also sends nitrite of amyl, in glass capsules cased in silk or cotton. The method of treating nitrite of amyl by placing it in hermetically sealed glass capsules preserved in cotton or silk, obviates the deterioration which takes place when the drug is left in a stoppered bottle; and is convenient in use and safe from danger in inhalation, as the patient cannot get an overdose.

### RIMMEL'S AROMATIC OZONISER.

Under this title Messrs. Rimmel have produced a powder consisting of particles of the pine, cedar, and other coniferæ, impregnated with volatile aromatic oils, of which that of eucalyptus is the most important. In this way they avail themselves of the ozonifying properties of these oils to which Dr. Day, of Geelong, and other physicians, have recently attached much importance. Dr. Hassall testifies that, when some of this powder has been exposed on a saucer in the room, he has readily detected ozone in the air of the room. Thus we may have here a fragrant and pleasant means of purifying the air of a sick room, as well as of places of crowded resort. The idea on which the Messrs. Rimmel have acted is scientific in its basis, and has been ingeniously and successfully carried out.

### SEABURY AND JOHNSON'S PLASTERS.

Messrs. Seabury and Johnson, of 28, Red Lion Square, London, have forwarded to us a series of plasters made in a style which deserves warm praise. Most of them are spread on India-rubber, others upon cotton-cloth. All of them are of the best make that we have yet seen, and, taken as a series, constitute a considerable improvement in the manufacture

of medicinal plasters, of which surgeons and physicians will on inspection easily realise the value. Their salicylated isinglass plaster, spread on strong water-proofed cotton-cloth, and applied by wetting, is the best surgical adhesive plaster which we have seen; the plaster itself is made of pure gelatine, and is antiseptic in character; it adheres firmly and closely on being wetted by a sponge; it does not spoil in any climate. It is obviously, from its manufacture, calculated to last much longer than the ordinary adhesive plaster. The mustard plaster, the capsicum plaster, India-rubber blister plaster, and pitch plasters, are all equally deserving of commendation; and the whole series are the best, so far as we are aware, that have yet been prepared for the use of the profession.

#### MATHER'S NIGRINE.

Mr. W. Mather, of Farringdon Road, London, and Corporation Street, Manchester, has introduced into commerce a new black marking fluid, bearing the name placed at the head of this article, and states that it possesses the following advantages. Neither warm iron or heating is required; it may be used as sold, and requires no preparation; the simplicity of the process obviates fear of burning or scorching the cloth; it can be used with any kind of pen, flowing readily from it, or with a block when the user wishes to impress his monogram upon the garment. When washed it becomes jet black, and gets darker with repeated washing and age, nor will the action of chemicals remove the stain; and, lastly, Nigrine will not injure the most delicate fabric. These are valuable attributes, and worthy of consideration. The fluid is sold in bottles varying in price from sixpence to five shillings, and may be had of any chemist or stationer.

#### LLOYD'S PATENT IMPROVED VENTILATORS.

The ventilator of Mr. Lloyd, of Winchester, is simply constructed, and in action thoroughly efficient, and is classed with ventilators without moving parts. It has been fixed by the inventor in public buildings and private dwelling-houses, and he has subsequently received many letters certifying its efficiency in action. One of its specialties is that, by a modification provided, it can without trouble be used for the ventilation of shafts from drains and sewers, for railway carriages and other public vehicles, chimney-cowls, and for the other purposes for which ventilators are required. It is desirable, when adopted for the ventilation of private dwellings and public buildings, that it should be connected with some form of inlet ventilator. It is not affected by atmospheric or climatic changes, and its chief points of excellence may be briefly said to be efficiency, durability, and economy.

#### MISCELLANY.

**PRIZES OF THE PARIS ACADEMY OF SCIENCES.**—The following prizes were awarded by the Academy at its annual meeting, January 28. In chemistry the Jecker Prize was awarded to M. A. Houzeau, for his researches on the Production of Ozone; the Lacaze prize to M. Troost, for his many valuable Chemical Researches. In botany the Barbier Prize was not awarded, but a sum of 1,000 francs was awarded to M. Galippe, for his Toxicological Studies on

Cantharides; one of 500 francs to MM. Lepage and Patrouillard, for their services to Medicine and Pharmacy; and another of 500 francs to M. Manouvriez, for various Physiological Researches. The Desmazières Prize was not awarded, but an encouragement of 1,000 francs was given to Dr. Quélet, for his work on the Fungi of the Jura and the Vosges, and one of 500 francs to M. Bagnis, for his memoir on the Puccinia. The Bordin Prize was awarded to M. Charles Eugène Bertram. In anatomy and physiology the Thore Prize was awarded to M. Jousset de Bellesme, for his researches on the Physiology of Insects. Three Montyon Prizes in medicine and surgery, each 2,500 francs, were awarded, one to Professor Hannover, of Copenhagen, for his work on the Retina of Man and the Vertebrata; one to M. Parrot, for his work on the Atrepsia of New-born Children; and one to M. Picot, for his Lessons in General Pathology; and honourable mentions, with 1,500 francs, were awarded to M. Topinard, for his work on Anthropology; MM. Lasègue and Regnaud, for their work on Therapeutics judged by Figures; MM. Delpech and Hillairet, for a work on the Accidents to which Workmen employed in the Manufacture of Chromates are liable; M. François-Franck, for his Researches on the Change of Size in Organs, in regard to the Circulation; and M. Oré, for his work on Intravenous Injection of Chloral. In physiology, the Montyon Prize was divided between Professor Ferrier, for his Experiments on the Effects produced by Electrification of the Surface of the Brain, and MM. Carville and Duret, for their Experimental Researches on the Functions of the Cerebral Hemispheres. Very honourable mention was awarded to MM. Jolyet and Regnard, for their Experimental Study of the Chemical Phenomena of Respiration in Aquatic Animals. The Lacaze Prize was given to M. Dareste, for his Researches on the Artificial Production of Monstrosities.

M. CLAUDE BERNARD, the eminent physiologist, died in Paris on the 10th instant.

DR. PEASLEE, one of the earliest performers of ovariectomy in America, died in New York on January 21st.

**THE LATE MR. ANDREW MURRAY.**—The death is announced of Mr. Andrew Murray, F.L.S., whose later life has been mainly occupied in close scientific observation upon the injury done by insects in our fields and gardens. Other natural history subjects of less direct practical importance occupied his attention at earlier periods of his life. In 1866, he published his well-known *Geographical Distribution of Mammals*, in which he brought together such facts as were known, and illustrated the distribution by coloured maps. In 1858-59, he was elected President of the Royal Physical Society, and he filled also the office of President of the Royal Botanical Society of Edinburgh.

M. REGNAULT, the eminent chemist, died on January 20. He was born at Aix-la-Chapelle, in 1810. He was Professor of Physics in the College of France, and of Chemistry in the Polytechnic School; he also held for some time the Directorship of the Porcelain Manufactory of Sèvres. His researches in the several branches of physics and chemistry, published in the *Memoirs* of the French Academy of Sciences and many other scientific journals, are numerous and of the greatest value. Of these, perhaps his publications on the expansion of elastic fluids, the determination of the densities of gases, the measurement of temperatures, and the determinations of the specific heats of liquids, solids, and gases, are the most important, and have brought his name most prominently before the world. He has also written many valuable papers on physiological questions. M. Regnault was elected a member of the Academy of Sciences in 1840, and in 1850 was created an officer of the Legion of Honour.

**THE WARREN PRIZE.**—The Committee of the Warren triennial prize, consisting of the visiting physicians and surgeons of the Massachusetts General Hospital, have awarded the prize for 1877, amounting to 371 dollars, to E. O. Shakspeare, M.D., of Philadelphia, for an essay on the Healing of Arteries after Ligation. The subject for



1880 will be Original Observations in Physiology, Surgery, and Pathological Anatomy. Essays should be forwarded to the resident physician, Massachusetts General Hospital, Boston, on or before February 1st, 1880. The amount of the prize will be 400 dollars. The number of essays presented in the recent competition was large. A dissertation on Pneumono-Dynamics and one on Certain Points on the Physiology of the Nervous System were highly praised for their merit. A third, On Bone, was much admired for the superb illustrations which accompanied it and the great labour which its preparation evinced, particularly to that portion devoted to dentine.

**SUICIDES IN FRANCE.**—According to the official criminal statistics for 1874, there were in that year 5,617 suicides, the highest number ever recorded in that country. Of these, 4,435 (79 per cent.) were committed by men, and 1,182 (21 per cent.) by women. The ages of 105 of the suicides are unknown. The 5,512 others are thus divided:—Under 16 years, 29; 16 to 21 years of age, 193; 21 to 40, 1,477; 40 to 60, 2,214; and beyond 60, 1,599. Among the suicides there are enumerated 1,946 celibates (36 per cent.); 2,645 (48 per cent.) were married, and 881 (16 per cent.) were widowed. Of the number of those forming the last two categories there were 2,259, or nearly two-thirds, who had children. The civil state of 145 individuals could not be ascertained. More than seven-tenths of the suicides were by strangulation (2,472), or by submersion (1,514). The suicides were, as always, more frequent in spring (31 per cent.) and in summer (27 per cent.) than in winter (23 per cent.) and in autumn (19 per cent.). As to the motives, there is no information about 481 of the suicides; the others are classed as follows:—Misery and reverses of fortune, 652; family troubles, 701; love, jealousy, debauchery, misconduct, 815 (of these, 572 were brought about by drunken habits); physical sufferings, 798; various troubles, 489; mental maladies, 1,622; suicides of persons guilty of capital crimes, 59.

**THE CINCHONA IN JAMAICA.**—The cinchona plant promises to become a most important product in Jamaica. The first seed was planted in the island in 1860, and, according to advices lately received, the plantations of cinchona now cover 350 acres, containing about 80,000 trees; about 50 acres out of this contain about 20,000 trees of an inferior sort, but it is hoped that even these may turn out well. The other 300 acres are covered by the two most valuable species of cinchona, and which, so far as Jamaica is concerned, have been favourably reported on by competent chemists. The 60,000 trees of these two precious species are now in all stages of growth, from trees of 30 feet high down to seedlings—the result of separate years' planting. The most advanced of these trees are estimated to be now worth £1 sterling each, and it is further estimated that in the course of a few years the more advanced trees will be doubled in value by the growth of the tree as well as by the increased value of the bark arising from the enlarged secretions and development of the alkaloids. Twenty thousand pounds of the bark, the *Colonial Standard* tells us, might have already been sent to the market, though it would have been at a great sacrifice, but a small crop consisting of a few thousand pounds has been reaped from thinnings this year. Indeed, the cinchona has become so naturalized that hundreds of thousands of seedlings are said to be growing over the fields. It was a bold experiment, the attempt to introduce cinchona into Jamaica, but it has proved thoroughly successful, and the Government, who undertook the responsibility, and to whom as yet the plantations belong, deserve credit and gratitude. No doubt now private enterprise will step into a field in which evidently a good harvest is to be reaped.

**INEBRIATES NOT ELIGIBLE AS VOTERS.**—In France, notwithstanding so many persons believe that wine-drinking prevents drunkenness, they have seen the need of passing the following law: That everyone condemned twice by the police for the crime of open drunkenness, is held to be incapable of voting, of elective eligibility, and of being named for the jury or any public offices.

**WILLIAM HARVEY.**—The first of the Friday evening lectures for this session, at the Royal Institution, was given on January 25 by Professor Huxley, on William Harvey. On the 1st of April it will be just three hundred years since he was born. While it is in connection with the discovery of the circulation of the blood that his name is best known, he did other work of importance. Professor Huxley referred to a diagram showing the circulation of the blood as it is now known, and, after describing it, passed on to the history of the successive steps of the discovery. The knowledge of the circulation, he said, might be divided into four sections: 1. The knowledge of the structures concerned; 2. The knowledge of what is contained in the different parts of the structure; 3. The knowledge of the course of the motion of the blood; 4. The knowledge of the cause of the motion. We had an error in our nomenclature in which we spoke of the pulmonary circulation and the systemic circulation. We should rather speak of a pulmonary half-circulation and a systemic half-circulation. A complete circulation of any part of the blood was its course from the place whence it started to its return to that same place again. The earliest investigations of the heart and the blood which we knew of were in the works of the fourth century B.C., which had come down to us under the name of Aristotle. In looking at old writers on scientific subjects, we must not take back to them the formulæ of the present day, but must strive to find what facts they expressed in the words they used. And if we applied this canon to Aristotle, we should find that, though his terms differed from ours, he had a very correct notion of the structure of the heart, though he did not rightly understand the motion of the blood. Erasistratus, of the school of Alexandria, about B.C. 250, studied the subject, and, through want of adopting the experimental method, fell into the error of supposing that the arteries and one side of the heart contained air. Galen found that the arteries were as full of blood as the veins; but he fell into an error of his own for want of direct experiment, and supposed that the septum that divided the right half of the heart from the left was porous. When the various scattered passages of Galen were collated, it was seen that he had a fair idea of the pulmonary half-circulation, and he seemed to have been aware that the results of food "concocted" in the stomach passed into the blood. He also knew that by some means the blood passed from the right side of the heart to the left, and thought it was through what he called anastomoses. During the stagnation of learning and up to the fifteenth and sixteenth centuries, when European minds were occupied, when occupied at all, in finding out what the Greeks knew, no scientific advances were made. Miguel Servetus (1509-1553) showed that Galen was wrong about the perforation of the septum, but he did not further advance our knowledge. In 1559, Realdus Columbus also urged the same, and a claim had been put in for Cæsalpinus that he helped to bring about right views, but apparently for this there was no good foundation. The work that Harvey did, Professor Huxley said, would be best explained by referring to the four divisions into which the subject was grouped in the lecture. Harvey left the knowledge of Nos. 1 and 2 as he found it. Of the motion No. 3 he gave a complete demonstration based on experiment, and showed that the motion of the venous blood was just in the reverse direction to that which had been before supposed. Among other methods, he adopted the simple experiments of ligatures on arteries and on veins, showing thus the direction in which blood was moving. With regard to No. 4, the cause of motion, he was the first who understood the mechanism of the heart. There was one thing he did not do which afterwards Malpighi (1628 to 1694) did, in watching the circulation of a frog's foot, and that was to see and prove the passage of the blood in the small vessels from the arterial "system" to the venous. In the concluding part of the lecture, Professor Huxley contrasted the real merits of Harvey with those of Bacon. He also dwelt on the value of experiment, and referred to recent legislation, by which, if a man did now what Harvey, honoured by his king, did, he would be placed in the same criminal position as a burglar.

# The London Medical Record.

## CHARCOT ON THE GENERAL CHARACTERS OF EPITHELIAL VISCERAL CIRRHOSSES.

IN a recent lecture on the subject, M. Charcot said: There is a character which is common to certain forms of subacute or chronic broncho-pneumonia; that character, you will remember, is that, while the walls of the respiratory canaliculi transform themselves into embryonic tissue, their epithelioid lining is replaced by one approaching the cylindrical type, and analogous to that of the larger bronchi. For example, we find it in the fibroid pneumonia of tubercular subjects, according to M. Thaon; the lobular pneumonia of syphilitic newly born infants; and in the carnisation of the lung described by Legendre and Bailly, and which represents to me the chronic state of common broncho-pneumonia. I ought to add that M. Friedländer has found very similar appearances in the lungs of animals submitted to the operation of division of their recurrent laryngeal nerves. In all lesions of the respiratory canaliculi it is necessary to distinguish two elements—1. A cellular growth of the connective tissue of the alveolar walls, carrying with it destruction of the special elements, muscular and elastic fibres, &c.; 2. Substitution of a cylindrical epithelial lining for the flat normal cells. Let us briefly recall some details of the development of the lung. You recollect that the two offshoots or diverticula from the posterior part of the œsophagus are divided into two parts—1. A layer of endoblastic cells, represented by a lining of cylindrical epithelium extending throughout the respiratory tubes; 2. A thick layer of mesoblastic tissue, in the midst of which the muscular and elastic fibres, the vessels, etc., are developed. Respecting the lesions in subacute or chronic broncho-pneumonia, it is interesting to observe that the changes constitute a reversion to this embryonic state of the organ, while the fact will assume still greater importance in your eyes if I can show you the same process in some varieties of interstitial inflammation, cirrhoses (if I may be permitted to use the term) of other organs as well as the lung; and with this object I shall draw your attention to these changes, first in the kidney, then in the liver.

I wish to consider with you that form of renal disease called contracted kidney, small red kidney, etc., names most of them borrowed from English nomenclature. According to my view, there is a distinct species of renal affection belonging to the order of Bright's disease, in which the organ is atrophied, cirrhotic, and which Dr. George Johnson has described as the small red kidney. The small fatty kidney or the mottled kidney is connected, as Dr. Johnson has shown, with the history of parenchymatous nephritis, of which it is, in fact, an advanced stage; it has nothing in common with the small red kidney, except that the process is situated in the same organ, leads to sclerotic atrophy, and reveals itself clinically by analogous symptoms. The lesions of the small red kidney are seated in the labyrinth; and with M. Kelsch I have endeavoured to establish

that the atrophy of the labyrinth and the relative integrity of the medullary portion explain the granulations which project from the surface of the organ. The red depressed portions correspond to the labyrinthic regions or atrophied convoluted tubules; the lighter projecting parts, the granulations, to the centres of the lobules or the collecting tubules which remain relatively healthy. Histologically, there are two prominent facts—1. The epithelium of the convoluted tubules undergoes granular degeneration, and finally disappears; 2. The connective tissue which surrounds and sustains the tubules undergoes embryonic transformation, and is developed in excess. But I request your attention upon one particular; at a given moment the dark granular epithelium, which in the normal state lines convoluted tubules, is replaced by a cuboid epithelium resembling that of the collecting tubules; this change has been described by all histologists who have been engaged with the subject, G. Johnson, Cornil, Ranvier, Kelsch, etc. It seems to be a fundamental characteristic of the small red kidney, and if met with in other forms is so only accidentally and in places. You will easily grasp the analogy existing between this process and that which I have described in the cirrhosis of broncho-pneumonia, but you will understand it better if I remind you, as I did in reference to the lung, of the embryonic condition of the kidney. In the embryo chicken, as early as the second day, a group of cells may be seen lying on each side of the undivided part of the mesoblast, outside the proto-vertebræ, and lying between these the epiblast and the mesoblast; these are the rudimentary Wolffian bodies. These masses, composed of mesoblastic cells, are soon hollowed out and lined by cylindrical cells; these cells, Waldeyer thinks, come from the epiblast—"separated from the epiblast at the time when there was apparent union between the epiblast and mesoblast" (Foster and Balfour). However this may be, by the fourth day the Wolffian body commences to show its structure; you see a series of convoluted tubes opening into the Wolffian canal, and terminated by vascular glomeruli, which are formed from the mesoblast. Their mode of development appears to be that from the anterior portion of each canal diverticula are formed, which lengthen, and form tubes bent upon themselves. These tubes are lined with cylindrical epithelium, like the Wolffian canal, but thicker. The true kidney develops later exactly in the same way from the anterior part of the Wolffian body. Thus we see that the changes in broncho-pneumonic cirrhosis and in the small red kidney are, *mutatis mutandis*, fundamentally the same—reversion to the embryonic state of the parts developed from the mesoblast, and, so far as concerns their epithelial lining, a tendency to reproduce the characters of the foetal state.

All that has been said of the kidney may be repeated of the liver, taking, for example, the group of chronic interstitial inflammations studied last year under the name of biliary cirrhoses. This group comprises—1. The results of ligaturing the bile-duct in animals; it is probable that ligaturing the ureter will be found to determine similar changes in the kidney; upon this point further experiments will be made. 2. The results of obliteration of the bile-duct in man by a calculus or any other obstacle to the outflow of bile; finally—3. Hypertrophic cirrhosis with jaundice. Before entering into this question, it is necessary to say a few words on the normal structure of the liver. The biliary canaliculi, as is well known, form in the interlobular fissures and spaces, a network of vessels



bounded by proper walls and lined by cubical epithelium, allied in character to the cylindrical epithelium of the great ducts; these networks are in direct continuity with intralobular bile-channels, which, destitute of a proper wall, run between the hepatic cells; this disposition differs from that of other glands mainly in the termination of the ducts in a network instead of in ampullated *culs-de-sac*, but if this plexus did not exist, the interlobular canaliculi could be represented as terminating in spaces lined on each side by hepatic cells, which are directly continuous with the epithelium of the canaliculi. In biliary cirrhosis the columns of hepatic cells disappear, and are replaced by cubical epithelium, the process beginning at the periphery of each lobule, while, outside, the connective tissue undergoes embryonic transformation, and becomes more or less thickened. In advanced cases, the lobule is represented by a network of canaliculi, just like interlobular ducts. This is the last stage of the metamorphosis, a change quite analogous to those which have been described in the kidney and lung. But in order to complete the account, some facts from embryology may be added. On the second day of the incubation of a hen's egg, a diverticulum becomes developed on each side of the duodenum, at first filled by hypoblastic cells surrounding a thick layer of mesoblastic tissue. Towards the end of the third day these diverticula become hollowed out and lined with cylindrical epithelium; soon they push into the mesoblastic tissue branched processes which ramify and anastomose. The ultimate ramifications form a close network of solid cylinders filled with hypoblastic cells. According to Balfour and Foster, the hollowed prolongations of the diverticula ought to be regarded as the rudiments of the bile-passages, while the network of solid cylinders represents the hepatic parenchyma. Supposing each cylinder represents a canal, the lumen of which is nearly obliterated, we have a plan of the structure of the liver very like that which Hering has described. This short summary, taken in comparison with the account of the changes in biliary cirrhosis, will show the analogies which exist between the pathological alteration and the liver in the first period of its embryonic development.

To resume, therefore, the changes which we find in these different organs are—1. Modifications of the glandular epithelium of hypoblastic origin; 2. Modifications of the connective tissue wall supporting this epithelium, and which is derived from the mesoblast. It is necessary to inquire which of these two is primary? M. Charcot is of opinion that it is the epithelial change, and therefore he calls these cirrhoses "epithelial". The reasons for this view are given. There is much reason to believe, says M. Charcot, that epithelial tissues have an autonomous existence independent of subjacent structures, or at least without direct participation with the connective tissue in which they rest, except for the supply of "interstitial liquid, a necessary influence for the maintenance of vitality in all the tissues". Experiments have shown that epithelium grows only from epithelium, as in Reverdin's skin-grafts and Schweninger's transplantation of a hair to which a part of its epidermic sheath was attached. More recently, Zielonko's experiment of removing the cornea of one frog and introducing it folded on itself with its epithelial surface outwards into a lymphatic sac of another, was followed by the formation of an encysting fibrous capsule separated from the epithelial surface of the cornea by a space which became

lined with epithelium. Moreover, growing epithelium may extend itself not only laterally but vertically, penetrating subjacent tissues in digitiform prolongations, reminding us of the mode of development of glands according to the observations of Remak and Kölliker: and it is upon this model, according to certain authors, among others Waldeyer, that cancers grow. A similar prolongation of the epithelium has been seen in lupus and elephantiasis, and also in the broncho-pneumonia of the animals operated on by Friedländer. In all these cases, the predominance of the epithelial lesion makes it evident that the subjacent changes are only secondary. In the observations on biliary cirrhosis produced by ligature of the bile-duct, the process of epithelial change could be watched along the course of the canals, although the enormous multiplication of the epithelium to which we have referred was not seen independently of changes in the surrounding tissue. But in Friedländer's observations on broncho-pneumonia, it is shown most distinctly that this commences as epithelial inflammation, and only secondarily implicates the connective tissue. It is hoped that by these distinctions, very subtle, perhaps, in appearance, we shall succeed in arranging the chaos which at present exists in the cirrhoses of organs. In the lungs, for example, M. Charcot hopes to show that at least two kinds differ from that described, namely a form which follows acute lobar pneumonia, and a form of chronic interlobular pneumonia, which appears to be due to an inflammation of the pulmonary lymphatics.

ROBERT SAUNDBY, M.D.

## ON FOREIGN BODIES IN THE ŒSOPHAGUS AND ON ŒSOPHAGOTOMY.

By B. VON LANGENBECK, Professor in the University of Berlin.\*

(Concluded from page 51.)

ŒSOPHAGOTOMY is a comparatively rare operation. First performed by Goursault in 1738, it was, according to a collection of cases by König, from that year to 1872, done only twenty-six times for the removal of foreign bodies.† There was a prevalent disinclination to the operation, the dangers and difficulties of which were overrated, and the indications for which were believed to be but seldom present. A review of the cases of foreign bodies in the food-tube shows, however that the operation might have come into use much more often, and that without doubt death might have been thereby averted in many cases.

The danger of œsophagotomy should by no means deter from the operation. If to the cases collected by König my two be added, there are 28 cases of the operation, of which 26 recovered and five died. When we consider, however, that of König's five fatal cases one is noted as doubtful, and that of the other four deaths three were due to gangrene and perforation of the œsophagus, without doubt a result of too long retention of the foreign bodies (two bones and a franc-piece having remained eight days in the œsophagus) the operation may fairly be regarded as attended with a comparatively small amount of danger.

\* Read before the Medical Society of Berlin (*Berliner Klinische Wochenschrift*, December 17 and 24, 1877).

† Von Pitha and Billroth, *Handbuch der Speciellen Chirurgie*, Band III, Abtheilung 1, Erlangen, 1872; and König, *Lehrbuch der Speciellen Chirurgie*, Band I, Berlin, 1875.

The method of operation is in the majority of cases so distinctly indicated by the position of the parts, that among living surgeons there can scarcely be a doubt that Guattani's plan of incision is to be preferred to others. The incision through the integuments begins at the middle of the thyroid cartilage, and ascends on the left side of the neck along the anterior edge of the sterno-mastoid, and about five centimetres (2 inches) above the manubrium sterni. The superficial cervical fascia having been divided, and the sterno-mastoid pulled outwards and backwards by sharp double hooks, the common carotid artery becomes visible through the middle cervical fascia covering it. This fascia is divided in the direction of the long axis of the wound and drawn outwards and backwards by strong hooks, so that the carotid, without being touched by the instruments, disappears from the field of operation.

It must not be forgotten that the carotid artery lies more superficially than the œsophagus, and that the latter becomes visible only after the deep cervical fascia has been divided. To accomplish this, the larynx is drawn to the right by sharp hooks, and the deep cervical fascia is divided along the outer edge of the sterno-thyroid muscle. If this muscle be now drawn towards the middle line, the œsophagus becomes visible. An elastic œsophageal sound, or a flexible one of lead or tin, of the thickness of the little finger, is introduced through the mouth into the canal, so as to press the œsophagus towards the left and enable it to be opened more easily and safely.

The incisions in the cervical fascia necessary for exposing the œsophagus are most safely made by raising the fascia with two pairs of hooked forceps, and dividing it between them. If in doing this the knife be allowed to act more by pressure, the vessels and nerves (inferior thyroid artery and recurrent laryngeal nerve) lying somewhat under it, slip aside and escape injury. Injury of the recurrent nerve is, however, not much to be feared. It ascends between the trachea and œsophagus, and is drawn to the right with the former organ. It is only when a large foreign body has pushed the œsophagus far to the left, that injury of this nerve can come into question.

The nearer this operation approaches important organs, the more must it assume the character of the finest anatomical dissection; and too much caution cannot be given against tearing asunder the tissues with the fingers or with blunt instruments, in the fear of wounding large vessels.

The advice given by A. G. Rechter (*Anfangsgründe der Wundarzneikunst*, Band 4, Göttingen) to open a way to the œsophagus with an ivory or horn knife, and to divide the parts therewith in a longitudinal direction, may be forgotten as belonging to a time long past, since the recommendation of this great surgeon to use cutting instruments as little as possible in œsophagotomy has found no adherents down to the most recent time.

If the œsophagus be not bulged outwards by the foreign body, or if the latter cannot be felt from without, the introduction of a guiding-sound through the mouth greatly facilitates the safe opening of the œsophagus. Vacca's "ectropœsophage" is not found in every surgeon's collection of instruments, and the advice to perforate the œsophagus by introducing Frère Cosme's arrow-sound through the mouth, and then to divide the wall of the œsophagus on it, does not deserve to be followed on account of the injuries which may be produced. The introduction of the

lithotomy-sound or of a silver male catheter may, in consequence of unsuitable curvature, be attended with difficulty; an ordinary strong electric œsophageal sound, or a flexible one of tin or lead seems to me fitted for most cases.

A circumstance which may render the œsophagus very difficult to be reached in the operation, is the swelling of the thyroid gland; and I must all the more direct attention to this, as I have not found it noticed in the description of the operation. When a large foreign body remains for several days sticking at the level of the cricoid cartilage, and produces difficulty of breathing by pressure on the larynx, there is always swelling of the thyroid gland from stasis of blood in the veins. The swollen gland lies over the œsophagus in such a way as to completely cover it. The fascia enveloping the thyroid gland must be divided in order to be able to raise the gland from the œsophagus.

CASE I. *Foreign Body in the Œsophagus; Fruitless Attempts at Extraction; Operation; Recovery.*—H., a journeyman baker in Berlin, aged 18, a healthy strong man, while eating meat on the morning of July 1, 1874, perceived that he had swallowed a bone. The result was painful pressure at the level of the cricoid cartilage, and inability to swallow solid food. On July 2, he came to the out-patient department in the afternoon. The foreign body, sticking in the left wall of the œsophagus, was at once detected by the ball-sound close below the cricoid cartilage, but could not be removed by the coin-catcher, in spite of repeated attempts.

On July 3, the patient was taken into the hospital. The troubles caused by the foreign body remained unchanged, viz., painful pressure at the level of the cricoid cartilage, greatly aggravated by attempts at swallowing, and impossibility to swallow solid masses, while small quantities of fluid passed. The piece of bone was to-day distinctly felt with the ball-sound, and was also seized with the coin-catcher, but could not be extracted.

Œsophagotomy was performed on July 3, in the manner above described. As the foreign body could not be felt from without after the œsophagus had been laid bare, a silver catheter was introduced through the mouth, and the œsophagus was opened on it. The foreign body could no longer be found, although the finger could be introduced into the œsophagus above and below without difficulty. The division of the œsophagus had probably removed the spasmodic contraction, and allowed the piece of bone to glide into the stomach. The wound was closed with adhesive plaster, and the patient was fed by the œsophageal tube, receiving daily three quarts of milk, nine eggs, soup, and wine. On July 4 the upper part of the cutaneous wound was adherent, the lower part gaped somewhat. There was no fever. On July 6, the patient had high fever (temperature, 39.5 cent. = 103.1 Fahr.), and the jugular region was painful. The fever continued up to July 12, with a remittent type. The percussion-sound on the right side as far as the third rib was higher, and from the fourth rib downwards duller than on the left, and there was here heard an abundant slightly resonant *râle*. The sputa were scanty, and mucopurulent. This condition continued until July 21, from which date the patient was quite free from fever.

He was fed through the œsophageal tube up to July 20. After this he swallowed solid and liquid food without difficulty. He was discharged cured on July 31.

CASE II. *Artificial Teeth in the Œsophagus;*



*Cesophagotomy; Recovery.*—Frau B., a mason's wife, aged 27, in good health and strong, had never had any previous illness. She was confined for the first time on January 8, 1876. On October 29 of that year, she was seized with what appears to have been epileptic convulsions. The paroxysms continued until noon, while the patient lay in bed, and on her recovering consciousness she found that she had swallowed the artificial set of upper teeth which she wore. The breathing was occasionally difficult, deglutition was impossible. Fluids passed in small quantity, and generally caused retching and vomiting. Attempts to remove the foreign body were ineffectual.

On November 2 she came to the polyclinic. Attempts at extraction were again made, but without result.

On November 3, five days after she had swallowed the foreign body, she was admitted as an in-patient. Her expression of countenance was perfectly calm, the breathing was free, but deglutition, as before, was quite impossible. The integument of the face had a slight icteric tint; the urine was free from albumen. She pointed to the pit of the stomach as the seat of the foreign body; in this situation she felt a painful pressure. The neck was uniformly swollen, the skin being unaltered, so that I formed the suspicion that there might be swelling of the thyroid gland. Pressure on the neck and palpation of the left side of the pharynx and œsophagus, produced no pain, and did not detect any projection or unevenness. Inspection of the fauces detected nothing unusual, beyond slight redness and swelling of the mucous membrane. The index-finger, introduced as far as the cricoid cartilage, met with no foreign body. The metallic ball-sound came into contact below the cricoid cartilage with a smooth hard resisting body, beyond which it did not pass, nor did we succeed in laying hold of the foreign body with the coin-catcher. With a long slightly curved œsophageal forceps, the upper projecting part of the foreign body was several times seized; it was, however, so smooth that the forceps each time slipped over it.

Cesophagotomy was performed on November 3. The incision through the skin was carried from the level of the cricoid cartilage along the inner border of the sterno-mastoid on the left side, ending two inches above the manubrium sterni. After the middle cervical fascia had been divided, and the sterno-mastoid drawn backwards and the larynx to the left, the carotid artery lay in sight. There now, however, arose considerable difficulty, inasmuch as the swollen thyroid gland completely covered in the œsophagus on the left, and was adherent by thin layers of exudation-matter to the neighbouring parts. It was found necessary to divide the deep fascia along the left border of the thyroid gland, and to strip off the latter from the œsophagus.

The tissues surrounding the œsophagus were so much infiltrated and swollen that, even when the œsophagus was exposed, a projection of the foreign body could not be made out. A flexible tin sound of the thickness of the little finger was therefore introduced through the mouth, until it came into contact with the foreign body, and the œsophagus was divided opposite the thyroid cartilage. The finger, on being introduced, came into contact with the gum-plate of the apparatus; the teeth had pressed deeply into the wall of the œsophagus. The attempt to lay hold of or to displace the foreign body by the finger was frustrated by its firm impaction; nor was it

possible to seize it with strong forceps, which always slipped. At last I introduced a fine elevator, with which I pressed the wall of the œsophagus forcibly to the left. In this way I passed beyond the foreign body, which was tilted up by the leverage action of the instrument, and withdrawn by a sequestrum-forceps.

The gum-plate, formed of solid India-rubber, contained four ivory teeth, and measured vertically 3 centimetres (1.2 inches), transversely 4.2 centimetres (1.6 inches). Between the four teeth (two outer incisors and two canine), was a gap for the two middle incisors, which the patient possessed; this had allowed the passage of fluid on the first day.

The hæmorrhage during the operation was very trifling. Several thyroid veins (before their division) and some small arteries were ligatured with catgut. As masses of mucus escaped through the wound, a drainage-tube was placed in the œsophagus and another in the lower angle of the wound, over which were applied compresses of cotton-wool soaked in a two and a half per cent. solution of carbolic acid.

During the first days after the operation, the patient was fed by the œsophageal sound. As, however, the introduction of the instrument was very unpleasant to her, she swallowed after the third day, slightly compressing the wounds in the neck with her left hand. The temperature rose at first to 38.7 cent. (101.66 Fahr.) in the evening, and then returned to the normal. On the third day after the operation, the drainage-tube was removed from the œsophagus; on the sixth, the other was removed from the wound in the neck; and on the eleventh day (November 13) the patient was discharged with a superficial granulating scar in the neck. On November 22 cicatrisation was complete, and there was no more difficulty in swallowing. On April 6, 1877, the patient was exhibited at the Congress of German Surgeons. No trace of the thyroid gland could now be detected.

A. HENRY, M.D.

## TRENDELENBURG ON GASTROSTOMY.

A SUCCESSFUL case of gastrostomy, with comments of much interest and clinical importance, is given by Prof. Trendelenburg, of Rostock, in the *Archiv für Klinische Chirurgie*, Bd. xxii, Heft i. This operation, the author states, when performed for the purpose of establishing a gastric fistula in cases of stenosis of the œsophagus, has hitherto been most unsatisfactory in its results, in consequence of its having been practised as a last resource for the relief of some malignant and, in itself, fatal disease. The risks of peritonitis are not so great as might be imagined, and may be much reduced by attention to antiseptic measures. In two only out of fifteen fatal cases collected by Dr. Jacobi, of New York, in 1874, was death attributed to suppurative peritonitis, whilst in two other cases it remained uncertain whether the patient succumbed to exhaustion or to incipient inflammation of the serous membrane. These returns, however, Dr. Trendelenburg points out, do not afford any positive information as to the risks of peritonitis after gastrostomy, because in some of the cases the patient died very soon after the operation, and before there had been time for the manifestation of any inflammatory reaction. But, even should it be proved that in past cases of gastrostomy the percentage of deaths from peritonitis has been high, such a result, the author holds, ought not to lead

modern surgeons to reject this operation. In consequence of the modifications in surgical treatment, based on recently acquired knowledge of the part played by septic processes in the causation of traumatic peritonitis, the prognosis of operations involving the abdomen has been considerably improved, and promises to improve in a still greater degree. Gastrostomy, with regard to the absence of any initial septic process, stands on a similar footing to enterotomy, to ovariectomy, and to an operation for the removal from the abdomen of a simple hydatid cyst. Each of these operations may be readily performed without shedding of blood into the abdominal cavity; and when no putrescent fluid is present, septic processes are not likely to result. Dr. Trendelenburg states that after Littré's operation, which he has frequently had occasion to perform, he has never yet observed any peritonitis.

There is one condition that renders gastrostomy a more hazardous operation than enterotomy. There is a constant tendency for the attached portion of the stomach to retract and to be separated from the margins of the wound in the abdominal wall; whilst, on the other hand, a loop of intestine thus fixed shows no such tendency, and remains in close contact with the parietes. In the latter case, the occlusion of the abdominal cavity is favoured by speedy union of the intestinal and abdominal walls at the seat of operation. In case of vomiting after gastrostomy, the stomach may be forcibly detached from the margins of the external wound. It is very necessary, therefore, in this operation to take precautions in the choice and the application of the sutures. In Verneuil's case, which was the first attended by a good and permanent result, the margins of the gastric orifice were fixed to the orifice in the abdominal wall by no fewer than fourteen silver wire sutures. Dr. Trendelenburg, whilst preferring silk to metal for sutures in gastrostomy, holds that it is necessary to pay more attention to their application than to the material of which they should consist. They should be numerous and close, and each should include a broad and thick portion of gastric wall. So long as vomiting continues after the operation, the stomach, it is recommended, should be kept empty, in order that there may be less tendency to retraction. In the operation, an endeavour should be made to open the stomach at such a part of its wall as can be freely and readily drawn forwards to the surface; this condition being fulfilled, it matters but little, the author thinks, whether the fistula be established nearer the cardiac or the pyloric extremity of the viscus.

Up to the present time but two cases of permanently successful cases of gastrostomy have been recorded. The first was that of a young man, aged 17 years, who, when much reduced through starvation, in consequence of an impassable stricture of the gullet, was operated on by Verneuil. In the report of this case (*Bulletin de l'Académie de Médecine*, No. 44, 1876) it is stated that the patient regained his normal weight and general strength after the operation, and that in the course of the first two months the weight of the body went up from 39 to 42 kilogrammes. (See LONDON MEDICAL RECORD, December 1876.)

The second case of successful gastrostomy is that here reported by Trendelenburg. The patient, whose age is not given, was a lad, who, in consequence of a tight cicatricial stricture in the lower part of the gullet, caused by the inadvertent drinking of some strong sulphuric acid, had suffered much for six months from the results of defective nutrition. The operation was performed on March 8th, 1876. A skin

incision, about two inches in length, was made on the left side, parallel to, and at a distance of one inch below, the inferior margin of the cartilage of the eighth rib. The whole thickness of the abdominal wall was then cut through along this extent, all the bleeding vessels being carefully secured. A portion of the left lobe of the liver was then exposed, and near this some intestine. After some little difficulty had been experienced in distinguishing between the stomach and the transverse colon, the anterior wall of the former organ, which was much collapsed, was drawn forwards and fixed to the outer wound by two long acupuncture needles. After the application of fourteen silk sutures, each carried through the whole thickness of the abdominal wall and through the wall of the stomach, the gastric orifice was made by two small crossed incisions. Into the cavity of the viscus, which was found to be quite empty, a drainage-tube was then passed. No vomiting followed the operation. On the following day there was but slight febrile reaction, and the abdominal wall then and subsequently remained lax and free from tenderness. On the second day nutritive enemata, containing egg and grated meat, were introduced through an elastic tube into the stomach. The sutures were removed on the third and fourth days. On the ninth day commenced an attack of gastro-intestinal catarrh, which lasted for some weeks. Subsequently the patient made a good recovery, and at the end of the fifth month was in excellent health, the weight of the body since the operation having increased by more than one-fourth. The food taken, which is of the ordinary kind, is first masticated by the patient, and then blown through a long elastic tube directly from the mouth into the cavity of the stomach.

In his observations on this case, Dr. Trendelenburg argues in favour of a small opening in the wall of the stomach. In the normal process of nutrition the food, he states, is passed along the œsophageal canal in a semi-fluid state, and not in solid masses. A large orifice necessitates the use of some special occlusion-apparatus, whilst, when the fistulous orifice is small, all that is required is a small drainage-tube, which can be readily closed by a cork. In consequence of the close contact with this tube of the surrounding swollen margin of the gastric mucous membrane, there is little, if any, external discharge of fluid. In the author's case there is no such reflux, even during very active exercise, and the surface of the skin around the orifice is quite dry. Any tendency in such orifice to dilate in consequence of the presence of the tube, may be readily obviated by the removal of this at bed-time. The fistula will then contract at once, as does the opening into the trachea after the removal of the cannula.

W. JOHNSON SMITH.

#### WESTPHAL ON AN EARLY SYMPTOM OF TABES DORSALIS.\*

IN the year 1871, Professor C. Westphal first observed that muscular contractions could be caused by striking certain tendons. Since then, he has paid considerable attention to this phenomenon in the most various nervous diseases. In tabes dorsalis, the ligamentum patellæ appeared to be of most interest. If this ligament be struck in a healthy man, while the knee is flexed at a right angle, or nearly so, a sudden contraction of the extensor muscles on the front of the thigh may always be felt. If the leg be hanging

\* *Berliner Klinische Wochenschrift*, January 7, 1878.



loose, a sudden extension of the leg is seen as a result of this contraction. This reaction, named by Dr. Westphal "knee phenomenon" or "leg phenomenon," can be produced in any healthy person. It is entirely absent, however, as the author has previously shown, in cases of *tabes dorsalis*, in which the well known symptoms of ataxia and disturbances of sensation, with or without affections of the cerebral nerves, are fully developed, and in which grey degeneration of the posterior columns of the cord can be certainly diagnosed. This observation has been confirmed by Professor Erb and Dr. O. Berger.

The question to which the author addresses himself in the present paper is, whether the knee-phenomenon is not already absent before the characteristic symptoms of *tabes dorsalis* are developed; also, whether this absence may not therefore in some cases afford material aid in forming an otherwise difficult or impossible diagnosis. The diagnosis of *tabes*, in its earlier stages, is as difficult as it is easy in its later developments. According to Westphal's recent observations, the absence of the knee-phenomenon in the earlier stages of *tabes* is a diagnostic point of great value.

Many cases of *tabes* begin with severe pains of certain definite character (shooting, lancinating, etc.) in the lower limbs. These pains have been regarded by many, especially French authors, as quite characteristic. But it is difficult for patients, especially the uneducated, to describe their pains accurately. The pains, moreover, are not always of the kind described, but sometimes closely resemble rheumatic pains. True neuralgic pains in the lower limbs, quite similar to those occurring in *tabes*, are not at all uncommon; they occur periodically, first at long and then at shorter intervals, last many years, and, apart from other symptoms, are not to be distinguished from the eccentric pains of commencing *tabes*.

In a number of such cases, in which the pains in the lower limbs were the only symptom of disease, Westphal has found the knee-phenomenon to be entirely absent, and has therefore diagnosed *tabes dorsalis*. One case was especially interesting, owing to the phenomenon being absent upon one side only. A woman, aged 36, suffered from shooting pains in both lower extremities, but those in the left were incomparably worse than those in the right. Hyperæsthesia of the skin was also present in the left limb. During many months the knee-phenomenon was completely absent on the left side, but it could always be unmistakably, though not strongly, produced on the right side. The patient's gait was unaffected, except by the pain during a paroxysm, and her muscular sense appeared normal. Still there was no doubt as to the diagnosis, for there was already advanced white atrophy of the optic nerves, inequality of the pupils, and frequent micturition. This case is an example of the failing of the knee-phenomenon in an unmistakable case of *tabes dorsalis*, before the development of ataxia or any degree of failure of sensation.

Westphal considers the diagnosis of commencing *tabes* justifiable in any case, in which the characteristic pains in the lower limbs are present and the knee-phenomenon is absent. The converse, however, is not so certain; the presence of the knee-phenomenon in a case presenting the peculiar pains in the lower extremities would not justify the conclusion that these were not of a tabic nature. But if the pains had lasted many years, and the knee-phenomenon could still be produced, it would at least be very unlikely that *tabes* was present.

Sufficient evidence is not yet at the author's disposal for him to state what diagnostic value is to be ascribed to the presence or absence of the knee-phenomenon in cases of *tabes*, which commence with affections of certain cerebral nerves—*e.g.*, the optic nerves or the nerves supplying the muscles of the eyeball. One case having reference to this point is, however, related. A gentleman, aged 40, had first diplopia and then a disturbance of sensation in the fingers, first of the right and then of the left hand. The knee-phenomenon could not be produced after many and careful trials; no other motor or sensory affection was present; the patient was certainly not syphilitic. Westphal thinks it very probable that this was a case of commencing *tabes*, but cannot speak with certainty. The unusual appearance of the sensory symptoms first in the upper extremities, in no wise contradicts this supposition, as it does sometimes occur in *tabes*. Still more interesting is the question whether the absence of the knee-phenomenon in a case of white atrophy of the optic nerve would justify the diagnosis of commencing *tabes*; because white atrophy so frequently occurs as an independent disease. Ophthalmic surgeons are the only persons who have sufficient opportunities for making observations numerous enough to solve this question.

It happens sometimes that ataxia of the lower limbs is present, and yet that the knee-phenomenon can be produced. It may be taken as certain that, in these cases, grey degeneration of the entire length of the posterior columns is not present, or, at any rate, that it does not extend into the lumbar region. This condition often occurs after acute febrile diseases, and its course is quite different from that of *tabes dorsalis*.

The symptom in question seems to be of the greatest value in certain cases of hypochondria, which are difficult to distinguish from some forms of commencing *tabes*. There are cases of *tabes* in which the peculiar pains are, from the first, absent, or in which their place is taken by vague sensations, difficult to describe, such as feelings of weight, creeping, cold, or as if parts of the body were dead or asleep. All these are similar to the complaints of hypochondriacs. Some tabic patients will describe a feeling of constriction round the waist, or a sensation of sinking in the abdomen in just the same way as a hypochondriac. A weakness of the bladder and diminished sexual power are also not uncommon in hypochondria. The difficulty of the case is increased by the fact that well-marked cases of *tabes* are not unfrequently complicated with hypochondriasis. If, in a case presenting the above symptoms, the knee-phenomenon cannot be produced after careful trial, *tabes dorsalis* may be safely diagnosed.

It is thus seen that the absence of the knee-phenomenon is a valuable early symptom of *tabes*. It is more useful than Romberg's test as to the ability to stand still with closed eyes, in that the latter is not developed until the later stages of the disease, when the diminution of sensation in the lower limbs is usually evident. It must be remembered, however, that it is, after all, only one symptom, and its significance must be estimated in conjunction with others, for there are motor affections of the lower limbs (*e.g.*, certain spinal paralyses, with loss of faradic excitability of the muscles) in which the knee-phenomenon cannot be produced, although grey degeneration of the posterior columns would certainly not be diagnosed.

The value of this symptom would be greatly

diminished if it could be shown that in some persons, with the patella, etc., normally placed, the knee-phenomenon could not be produced in health. Such individual peculiarities may exist, but the author has never met with one among large numbers of healthy persons whom he has examined. A percussion-hammer is the best instrument with which to strike the ligamentum patellæ. In some cases only circumscribed portions of the ligament are sensitive enough to cause the reaction. In doubtful cases, the knee should be bared, and should be struck very carefully and as elastically as possible. It is also necessary to see that the patient does not keep his extensor muscles voluntarily contracted.

A hope is expressed by the author that the earlier diagnosis of this afterwards well-nigh incurable disease may possibly lead to a more effective treatment of it.

CHAS. S. W. COBBOLD, M.D.

### BUCHWALD ON REVERSED WRITING IN BRAIN-DISEASE.

IN the *Berliner Klinische Wochenschrift* for January 7, Dr. Buchwald reports three cases illustrative of mirror-writing (*Spiegelschrift*), and makes several observations on the subject.

While much attention has recently been paid to the symptoms of aphasia in cases of hemiplegia, very little notice has been taken of the various degrees of agraphia, which are often also present. The latter are important, because it frequently happens, that when the power of speech is quite lost, a true estimate of the mental condition of the patient can only be formed by means of his writing, and even when the power of speech is partially retained valuable information may still be derived from his written language. Mirror-writing, that is to say, from right to left, which only corresponds to ordinary writing when seen in a mirror, must frequently have been observed in patients suffering from right hemiplegia, but, as far as the author is aware, has nowhere been put upon record.

The first case was observed two years ago. A workman, aged 45, had had an ordinary apoplectic attack, which left him with right hemiplegia; a mixed form of aphasia was present; his right hand was useless for the purpose of writing, and when asked to write with the left he wrote his name uncommonly well from right to left in mirror-writing; figures from 1 to 7 were written in the same way. When his attention was drawn to the fact of his writing being reversed, he could not for some time be induced to write from left to right; when, however, his name and some figures properly written were put before him as a copy, he managed to imitate some of them, though not nearly so well as he had written in the reverse direction; he was also continually going back to his mirror-writing. He eventually succeeded in writing the figures 1, 2, 4, 6, 8, 9, correctly, but 3, 5, and 7 were always reversed. If small sums in multiplication, correctly written, were given him to do, he constantly put the result down in mirror-writing. No disturbances of vision were present, but alexia was so in a high degree. After six months' treatment in the Klinik at Breslau the aphasia, agraphia, and alexia had gradually improved, but the tendency to reversed writing still remained; it was still a great effort to the patient to copy writing from left to right; he thought it impossible to write any other way than from right

to left with the left hand. If he assisted his right hand, which had now regained some power, with his left, he wrote some things correctly and others not. The figure 5 was most difficult to him; even with the right hand he always wrote it reversed or partially so. The patient was removed to a workhouse, and the same symptoms with regard to his spoken and written language persist, except that, having gained a little more power in the right hand, he is able to write rather more correctly with the help of his left.

The second case was that of a woman, the widow of a mason. In consequence of aortic and mitral insufficiency, she had an attack of cerebral embolism; right hemiplegia and a high degree of mixed aphasia were the result. When called upon to write with the left hand, it appeared at first that she was producing meaningless scribble, but it was afterwards found that the few first letters of her name could be easily made out in mirror-writing.

The third patient was under the care of Dr. Berger. He was a fruiterer, aged 39, who had cerebral embolism following aortic disease. The right hemiplegia and aphasia have almost disappeared; the patient, who shows no disturbance of intellect, writes his name, figures, etc., as far as his agraphia permits him, with the left hand, in reversed characters; with the right he writes correctly. This patient also said that he could not write any other way than from right to left with the left hand; his tendency to reversed writing lasted many months, and was exhibited at a meeting of a Medical Society.

How far is this symptom constant in right hemiplegia, how is it to be explained, and of what practical value is it?

On looking over the records of the Klinik, the author found that no tendency to mirror-writing had existed in cases where the paralysis and aphasia had been of slight degree, nor when they had been of short duration, as in syphilitic disease.

A considerable number of healthy persons of various ages and degrees of education were caused to write their names, figures, and other words with their left hands; the following was the result. Most of the children said at first that it was impossible to write with the left hand at all, while the greater number of the adults, especially the most intelligent and observant, wrote, or tried to write correctly from left to right. A large number, especially children, wrote, apparently unconsciously, mirror-writing with the left hand as well and as easily as ordinary writing with the right. When the reversed appearance of the writing was pointed out to them they were at first astonished, and then said that was the only possible way of writing with the left hand; on being induced, however, to try to write from left to right with the left hand, they were successful in doing so, but the ordinary writing was not nearly so good as the reversed. One little girl, aged 11, who very slowly and with great care had succeeded in writing her name correctly but very badly with the left hand, was asked to write it quickly, and at once wrote it in mirror-writing much better than she had previously done it from left to right, although she had never practised reversed writing.

There is, therefore, in a great number of persons, especially children, a tendency to make, in writing with the left hand, movements analogous to those made in ordinary writing by the right hand, and consequently to produce reversed writing; this latter is very easy to many, whereas the contrary movements are performed with difficulty. The same difficulty is observed in beginners learning to play the



piano. This tendency to making analogous movements with the two hands can, both in writing and piano-playing, be overcome by care and practice.

In the case of paralysed patients, the degree of intelligence, and the power of concentrating the attention play an important part. Berger observed no single case of reversed writing among patients belonging to the upper classes. If the paralytic attack be slight or of short duration, the tendency to reversed writing does not come on, at any rate not as a result of disease. When the patient's general condition and his affection of speech, etc., improve, his powers of observation become greater or are more easily awakened, and he is able to overcome the tendency, especially if it was not present in any great degree before the attack; this latter point can, however, seldom be ascertained. The physician is thus enabled, in cases of right hemiplegia, by means of the patient's written language, to obtain valuable information as to the condition of the psychic functions; he will also find that complete agraphia is not always present, although the apparently illegible writings of the patient may have led to that belief. Mirror-writing in these cases takes the place of ordinary writing; and the examination of it has a certain practical value.

CHAS. S. W. COBBOLD, M.D.

#### HEMKES ON ATROPHY AND SCLEROSIS OF THE HIPPOCAMPUS MAJOR IN EPILEPSY.

HEMKES (*Allgemeine Zeitschrift für Psychiatrie*, Band 34, Heft 6) says that, since the year 1869, *post-mortem* examinations have been made at the Hildesheim Asylum in the cases of twenty-seven male and seven female epileptics, especial attention having always been paid to the condition of the hippocampi. In only six instances was any change, consisting of abnormal hardness or considerable shrivelling of one or both hippocampi, found to have taken place. Ten years ago, Professor Meynert described 20 cases of epilepsy in which pathological changes had been found in the cornu Ammonis, and he expressed the opinion that they would be found to be very common in that disease. Charcot has since pointed out that this is a mistake, and Hemkes now confirms his opinion.

The writer's six cases may be shortly given as follows. 1. Male, weakly and neglected from childhood; at 7 years old, had an attack of typhoid (?) from which he did not recover for a year; at 11 years old became epileptic; at 21 his mental symptoms necessitated removal to the asylum; died at 27. Skull small and asymmetrical, weight of brain 1220 grammes, brain-substance dry and firm; the anterior and lower half of the left cornu Ammonis indurated and shrivelled for a space of about three centimètres.

2. Male, became epileptic in early childhood, had a discharge from the ear, in consequence of which he became very nearly deaf; at 35 was admitted to the asylum very demented; died at 52. Skull large, cerebral substance anæmic, weight of brain 1200 grammes; both hippocampi shrunken and indurated, the left united by adhesions to the surrounding walls of the ventricle.

3. Male, had meningitis in the first year of life and suffered ever since from epilepsy; mental and

bodily development was arrested; at 18 was admitted to the asylum on account of maniacal attacks, and died the next year after a succession of fits. Weight of brain 1160 grammes, brain-substance hyperæmic, cortical layers of a very dark colour, the ependyma of all the ventricles thrown into many folds; the left hippocampus major shrivelled into a thin, hard cord.

4. Male, at three months old had convulsions, which developed a month afterwards into epilepsy; said to have been an intelligent child, but was deeply demented on admission to the asylum; died at 27 in a fit. Skull small but well formed, pia mater somewhat clouded and thickened, cortical substance thin and pale, ependyma on floor of lateral ventricles much folded and thickened; both hippocampi shrivelled into hard, string-like bands, the ependyma upon and near them, as also that in the fourth ventricle, rough and leathery; weight of brain 1320 grammes.

5. Male, had severe scarlatina with serious brain-symptoms and muscular spasms at 11 years old; convalescence was slow and mental weakness remained; at this time repeated epileptic seizures took place which afterwards became worse; patient became quite demented and died at 30. Skull large and thick, almost square; lateral ventricles dilated, containing much clear fluid; the right hippocampus had become a thin, hard, fibrous band; weight of brain 1480 grammes.

6. Female, illegitimate, became epileptic at six years old; at 13 had typhoid fever, after which the fits were more frequent; at 29 she was admitted to the asylum greatly demented; died at 33. Skull compact and dry, without diploë; soft membranes slightly clouded and thickened; cortical substance of a dark colour; weight of brain 1050 grammes; left cornu Ammonis shrivelled to about half its natural volume and markedly hardened; right hippocampus normal.

Some observers look upon atrophy and sclerosis of the hippocampus as a cause, and others as a result, of epilepsy. It is certain that this change has, as yet, with very few exceptions, been only observed in epilepsy. That it is not a cause of epilepsy, the writer tries to prove further on; he also doubts whether it is a result of it. He considers that the atrophy of the hippocampus is independent of the epilepsy, and is to be regarded only as a result of partial encephalitic processes, which are, of course, at first of an inflammatory nature and subsequently lead to atrophy of the affected parts of the brain, and consequently also of the hippocampus. If, in a brain with an atrophied hippocampus, indications of such processes were found in the large ganglia or cortical substance, the author would consider the epilepsy to be due to these latter. A diminished weight of the brain, among other things, points to such encephalitic processes with resulting atrophy having taken place; in four of the above cases the diminution of weight is very marked; the average weight, moreover, of the above six brains is 250 grammes below the average of the brains of the other 22 epileptics examined since 1869.

Two other points are noteworthy in the above cases.

1. Atrophy and sclerosis of the cornu Ammonis was only found in epileptics whose epilepsy commenced before the twelfth year of life; in most of the cases it had begun in earliest infancy.

2. With the exception of the sixth case, the history of which is very imperfect, all the patients had previously suffered either from severe brain-disease

or from acute disease with marked brain-symptoms.

It is possible that, taking these two observations into consideration, atrophy of the hippocampus might be diagnosed during life. It is also remarkable that all the other twenty-eight epileptics who died in the asylum since 1869 had either become epileptic in later life, or as a result of causes other than those mentioned above.

With regard to the question as to atrophy of the hippocampus acting as a cause of epilepsy, the following case is of interest.

H. S., male, had an inflammatory (?) disease of the brain at 31 years of age, and on its subsiding, he became at once epileptic and insane; he was at times elated and had grandiose delusions, while at others he was melancholy and once attempted suicide; his fits varied in severity and frequency until, a little over two years from the commencement of his illness, he died after a succession of twenty-three fits within a few hours. A medullary cancer was found in the posterior lobe of the right cerebrum; it had its origin in the anterior part of the right hippocampus major, which was quite lost in the mass of the tumour.

It would be very tempting to ascribe the suddenly commencing epilepsy in this case to the carcinomatous change in the right hippocampus; but it cannot be decided whether, at the time when the hippocampus alone had first become cancerous, epilepsy was present or not; perhaps the epilepsy only commenced when the surrounding parts were also involved, or when the intracranial pressure became abnormal. This case, however, led the author to consider whether epilepsy might not be caused in animals by destroying the hippocampus.

Professor Nothnagel (Virchow's *Archiv*, Band 58) injected chromic acid into the hippocampi of rabbits and also produced in them small injuries with needles. Neither of these proceedings was followed by any result whatever. Hemkes has repeatedly destroyed the hippocampus in animals, also without any result. It is therefore certain that, if the unknown functions of the cornu Ammonis are the same in man as in animals, pathological change in it does not cause epilepsy. A doubt still remains, however, for the hippocampus in animals is much more largely developed in proportion than in man; it forms in them quite an important ganglion, whereas it is only rudimentary in the human brain.

CHAS. S. W. COBBOLD, M.D.

#### MALBRANC ON THE TREATMENT OF GASTRALGIA BY THE INTERNAL STOMACH-DOUCHE, ETC.

DR. MALBRANC, of Naples, has published in the *Berliner Klinische Wochenschrift* for January 28 an article on the treatment of gastralgia by the stomach-douche. D., a governess, aged 22, suffered three years ago for several months from stomach-derangement without any apparent cause, presenting symptoms of a gastric ulcer. Under treatment, she recovered and continued well until four months ago, when she began again to suffer from general weakness, and neuralgia, chiefly of the face. She gradually became much reduced, and after a time digestion again became disordered, with constipated bowels.

Ten weeks before she came under notice these symptoms were aggravated, and were accompanied by a fixed pain immediately below the ensiform cartilage, by acute tenderness in the dorsal region, frequent palpitation, and a sense of constriction of the throat. The appetite failed entirely, the little food taken was returned, and there was some blood in the stools. Various means, sinapisms, ice-pills, applications of extract of belladonna, etc., were tried, but in vain. The paroxysms of pain which came on from three to four hours after each meal, were relieved by hypodermic injections of morphia; but in spite of nutrient enemata and faradisation of the epigastrium the patient only became rather worse, so that mental emotions and straining at stool were enough to bring on the gastric pain. She now came under the care of Professor Kussmaul in Strasburg, whose assistant Dr. Malbranc then was. A regulated diet failed to afford relief. The following treatment was therefore adopted. In the morning a quantity, amounting in the end to 2 to 3 litres ( $3\frac{1}{2}$  to  $5\frac{1}{2}$  pints) of tepid water, aerated with carbonic acid in the manner of soda-water, was injected by means of an elastic tube into the stomach, and after a while again drawn off. The stomach was thus washed out every day. Under this treatment the patient improved, so that in three weeks' time she was able to take a varied diet of meat and bread. The injections of morphia were gradually diminished in frequency, but were still required for the relief of the gastric pain, which always recurred when an attempt was made to evacuate the bowels. To relieve these pains and improve the state of the bowels, one pole of a battery was introduced into the stomach several hours after breakfast, while the other electrode was passed successively over all the abdominal muscles, and thus a powerful induction-current was daily passed for five minutes through the stomach and abdominal walls. Within the next following days, defæcation became perfectly natural and painless. In a month, the patient recovered completely under the continued use of the stomach-douche and of internal faradisation, and was able to resume active employment. She has continued well ever since.

With reference to the question of the *modus operandi* of the douche with warm water holding carbonic acid in solution, the following points come under consideration.

1. The stomach is unloaded by the douche, and is thus enabled to recover its contractility. In all gastralgæ occurring in consequence of overloading of the stomach, as frequently happens in typical cases of dilatation of the stomach, this emptying the viscus of its contents is a sure means of relief.

2. The removal of acid or acrid matter and the cleansing of the mucous surfaces by means of Vichy or other alkaline water. It is often important in cases of gastric dilatation, when large quantities of half-digested food are apt to accumulate, thus to cleanse the coat of the stomach of acid, perhaps fermentary mucus. This can only be done effectually in the morning, and when the stomach is yet empty. Not only is digestion thus facilitated, but the formation of large quantities of flatus, which is productive of pain and distress, is prevented.

3. Warmth thus locally applied to the inner surface of the stomach has a soothing influence, diminishing irritability of the gastric nerves and relaxing muscular spasm. To this is due the utility of a daily morning draught of warm water in certain cases of painful irritable dyspepsia. But the cases in which the warm douche is likely to be



attended with benefit must be carefully distinguished from those in which it is inadmissible, owing to extensive ulceration and the tendency to hæmorrhage. Closely analogous is the effect of injections of warm water *per anum* in certain forms of intestinal colic, especially lead-colic, in restoring the regular normal peristaltic movement of the bowels. Indeed, it is found that the warm stomach-douche is eminently successful in overcoming the constipation which is a frequent symptom in nearly all cases of gastric disorder.

4. The mechanical impact of the stream of water on the coats of the stomach stimulates the vaso-motor nerves, and so excites a healthy capillary circulation. Moreover, a healthy peristaltic movement of the stomach can often be excited by gently kneading the stomach with the open hand, after somewhat distending it with warm water. This has the effect also of completely cleansing the large rugæ which generally exist in the interior of large flabby stomachs.

5. The carbonic acid held in solution by the injected water acts as a direct sedative on the irritable gastric mucous membrane, and also tends to promote intestinal peristaltic action.

The introduction of the stomach-tube itself need in reality present no greater difficulty than the passing of a catheter into the bladder. The following points should be attended to.

1. Before introducing the tube, we should measure off on it and mark the distance from the mouth to a point opposite the ensiform cartilage of the sternum. We thus ensure the tube passing, when introduced, to a distance of one or two inches beyond the cardiac end of the œsophagus, and no further, and so avoid all risk of injuring or perforating the coats of the stomach.

2. It is a source of comfort to the patient to be able to grasp the tube with his teeth, whereby it is steadied, and also the amount of salivation and the tendency to retching are reduced. For this purpose, a notched bone or ivory slide should be passed over the tube for the patient to bite upon.

3. The tube should be rendered flexible by immersion in warm water, and oiled, previously to its introduction.

4. The patient should sit in as erect a position as possible, with the head bent backwards. The tube which, with the attached funnel, should be first filled with warm water and held compressed between the fingers, is then introduced until the prominence of the spine is felt obstructing its progress, when, on rapidly inclining the head forward, the tube will of itself slide into the stomach.

5. Should the entrance of the tube into the stomach be opposed by spasm of the œsophageal cardia, it is only necessary to allow the water to flow through the tube against the constriction when the spasm will readily give way.

The danger of detaching the mucous membrane of the stomach by the suction of the pump is extremely small. The only real danger to be guarded against is perforation of the gastric walls by the tube, especially when there is ulceration, or adhesion of the stomach to surrounding viscera. All risk, however, is avoided by previous softening of the tube, by measuring off the distance to which it is to enter, filling it with water, and by the use of the notched slide.

W. J. TREUTLER, M.B.

## FLINT, BARKER, AND PEASLEE ON ALIMENTATION BY THE RECTUM.

At a recent meeting of the New York Academy of Medicine (*New York Medical Record*, January 19), Dr. Austin Flint read a paper on the administration of aliment by the rectum.

From the time when Samuel Hood first suggested it in 1822, up to quite a recent date, rectal alimentation had not been regarded as an important measure for sustaining nutrition; at least, only slight reference had been made to it by writers on practical medicine. Of late, interest in the subject had been somewhat awakened. It had not been altogether because of want of cases, which might show that life could be sustained wholly by rectal alimentation, that such tardiness in recognising its value had been developed.

Reference was made to a case in which life was sustained for three consecutive months by this means.

A second case was referred to, which was a case of hæmatemesis; exhaustion and exsanguination were very marked. The patient was supported entirely for three weeks by nutritive injections, and the nutritive material was restricted to animal broth, which was tolerated in considerable quantities. Occasional doses of laudanum were added to promote sleep. There was no evacuation from the bowels while rectal alimentation was being pursued. There was a spontaneous evacuation from the bowels, small in quantity, soon after returning to nutrition by the mouth, showing that the nutriment introduced into the bowels had been assimilated.

Reference was made to a third case, in which life was sustained one year and three months by rectal alimentation, and during five years the patient had depended almost entirely upon this method of sustaining nutrition.

Another case was referred to, in which the patient lived one year under the support chiefly of rectal alimentation.

There were clinical facts sufficient to prove that life could be maintained indefinitely in cases in which recovery was possible, that the improvement could be secured in cases in which recovery could not reasonably be expected, and that increase in the weight of the body could be realised by rectal alimentation.

The subject was further studied under three heads:—1. Indications for its use; 2. Appropriate diet to be employed for this purpose; 3. Certain practical rules to be observed.

Rectal alimentation was indicated in obstructions of the œsophagus, the cardiac or the pyloric extremity of the stomach, sufficient to prevent adequate nutrition. It was also indicated in the treatment of gastric ulcer, hæmatemesis, acute gastritis, persistent irritability of the stomach, certain cases of typhoid fever, certain cases of coma, etc.

The physiology of the subject was briefly considered, and it was thought not difficult to understand that, although the aliment met with no digestive juices, the secreting glands, which existed in the large intestine in considerable numbers, might take on a vicarious action when the glands of the stomach and small intestine were not excited into activity by the presence of ingesta. The idea was also advanced that food introduced into the rectum might excite secretion by the gastric and intestinal glands, and, in absence of ingesta in those parts of the alimentary canal, the fluid might pass into the large intestine in sufficient quantity to effect digestion

there. Whatever the explanation might be, the clinical fact was well established that digestion of aliment, when placed in the rectum, did take place without the aid of agents which effected digestion outside of the body.

A variety of diet was regarded as better than the persistent use of the same kind of food prepared in precisely the same manner. From analogy, it was reasonable to suppose that such agents as had been found to promote digestion outside of the body might be added to the injections with advantage. Further clinical facts upon that point were needed. The articles now used were meat-solution, pancreatic emulsion, Liebig's extract of meat, with or without milk, eggs, mutton and chicken broths. A pancreatic meat emulsion was mentioned, made as follows. From five to ten ounces of finely chopped meat were added to fully one-third of that weight of the fresh pancreas of the ox, the fat being removed, and mixed with five ounces of water; the whole was reduced to the consistence of a thick soup.

It was desirable to determine more accurately the affections and conditions in which rectal alimentation was most available, and whether the range of that form of diet might not be extended. Experimental observations upon healthy human subjects would be of interest, and were required. In the cases which had fallen under Dr. Flint's observation, the nutritive injection had not been carried above the rectum. In cases in which the rectum was or became irritable, one-half or a pint of milk could be carried up into the colon and be retained without difficulty. The average quantity of material to be employed in this mode of treatment was from three to six ounces, and the intervals between the injections might vary in length from three to six hours. Small quantities of some preparation of opium might be added to the injection, if they were not well tolerated. It remained to be settled whether or not opium had the same influence upon rectal as upon gastric digestion—namely, to impair it. Preparatory to the beginning of the treatment, the bowels should be emptied either by means of enemata, or by a laxative given by the mouth. As a substitute for drink, when necessary, simple water may be thrown into the bowel, and the surface of the body freely sponged. Alcoholics and medicines might be added to the nutritive injections, or they might be given separately, or they might be used hypodermically. At first, nutritive injections might not be retained, but, if persisted in, they would soon be well tolerated. On the other hand, in some cases they were well tolerated at first, but after a time they were not retained. In such cases it was well to stop them for a short time, when they could probably be renewed with success. It was not thought necessary to wash out the rectum each time prior to using the administration of the nutritive injection. The nutritive injection should be *tepid*. Firm pressure should be made over the anus with a sponge or towel, until the desire to remove the injection had passed away. If the nutritive injections met the requirements of the case, there would follow a sense of comfort and satisfaction the same as after taking a meal in the ordinary way.

In the discussion which followed the reading of the paper, Dr. Fordyce Barker alluded to cases other than those referred to by the author of the paper, in which rectal alimentation could be resorted to with the greatest propriety and advantage. There were cases in which paralysis of the muscles of deglutition was developed to such an extent as to

preclude the possibility of getting nourishment into the stomach by voluntary action on the part of the patient; and in such instances rectal alimentation might be the means of sustaining life until such paralysis disappeared. Cases of paralysis of the muscles of deglutition, as the result of diphtheria, were cited, in which nutrition and life were sustained for ten and twelve days wholly by nutritive injections. At the end of that time recovery from the paralysis had occurred to such an extent as to permit the patient to swallow, and ultimate recovery took place. The stomach-tube was used at first, but it soon became impossible to continue its use. Reference was made to a case of paresis of the right side of the body and of the muscles of deglutition, associated with pregnancy and albuminuria. The woman was sustained by rectal alimentation, premature delivery was effected, and good recovery followed.

Reference was also made to a disease which in certain respects resembled what had been described as degeneration of the gastric tubules, but which, so far as his experience went, differed essentially from it, both with reference to its pathology and its results. While it resembled the disease described as degeneration of the gastric tubules in the fact that there was loss of appetite, nausea, vomiting, progressive emaciation, and rapid development of feebleness, it differed from that disease in certain particulars, as follows. In the first place, all those cases in which degeneration of the gastric tubules and of the glands of the intestines had been found, had occurred in patients somewhat advanced in life. The disease to which Dr. Barker alluded, of which he had seen five cases, had occurred in young subjects, between the ages of 20 and 45. It was characterised by very excessive vomiting, the quantity of fluid ejected being from two to five times as large as that taken into the stomach, or even from three to six quarts of fluid might be vomited without having taken anything into the stomach. The material regurgitated was usually of a brownish colour, was exceedingly offensive, the patients complaining of its pungency; it was acid to the taste, although showing an alkaline reaction. With such vomiting there was rapid emaciation and rapid depression of spirits. There was absence of all evidence of any organic disease, such as ulcer or carcinoma; there was no tumour, or tenderness, or pains, but simply an excessive regurgitation of fluid from the stomach, as described.

Dr. Barker was of the opinion that, in those cases, there was no disease of either the glands of the mucous membrane of the stomach or of the intestines, but that it was primarily and essentially a neurotic affection. He was brought to that conclusion by a case in which the patient absolutely refused to be treated by the rectum, but determined to abstain entirely from taking anything by the mouth. This total abstinence, except an occasional swallow of water, was continued for days. At the end of that time, the man thought he could take some champagne, and accordingly procured and drank two bottles of iced champagne within a remarkably short space of time, and without producing any deleterious results. From that time he was able to take nourishment by the mouth and retain it, and rapid recovery was made. It was thought that the alcohol and the carbonic acid acted as a sedative to the irritable stomach. Since that time he had seen three cases, and they were all successfully treated by means of rectal alimentation, with the addition of such doses of



anodynes as were necessary to allay all irritation.

With reference to irritability of the rectum such as prevented retention of the nutritive injection, even though opium was added, Dr. Barker had overcome that difficulty by passing the tube high up into the colon, so that the fluid would be thrown into the intestine *above* the rectum.

Dr. E. R. Peaslee regarded the value of rectal alimentation as inestimable. It was sometimes remarked that, if a patient was suffering from some active inflammation, it might be best not to make use of any alimentation at all; it was better for the patient to starve for a time. He was of the opinion, however, that such a view was entirely wrong; for, if those same patients, in ordinary health, with a pulse of 65 or 70, and a temperature of 98° or 98½° F., required a certain amount of alimentation to repair waste of tissues, they required nourishment quite as much when the pulse was 110 or 120, and the temperature 102-3-4-5° F., for the waste of tissue was going on much more rapidly than in health. Dr. Peaslee had acted in accordance with that principle during the past twenty-five years, and if the patient did not retain nourishment when taken by the mouth, no matter whether he had pneumonia, or peritonitis, or any other inflammation, delay was not made more than twenty-four hours in way of trial, before attention was turned towards sustaining the patient, as well as giving proper medicines, by the rectum. If a patient ever required nourishment, it was when he was rapidly being consumed by a temperature of 104° or 105° F. It was thought that we were getting to understand that fact by the treatment of pneumonia now commonly adopted. We now nourished our patients in the best possible manner in the treatment of pneumonia, and the same thing was applicable in the treatment of peritonitis. He would extend this form of alimentation—rectal—very much beyond what had been stated. It could with propriety be used in cases of persistent vomiting, which sometimes occurred in women at about the time of the menopause; in the treatment of the exhausting vomiting of pregnancy; also in vomiting after ovariectomy and in connection with fevers, etc.; in any and every case, if the patient had been twenty-four or forty-eight hours without retention of nourishment taken by the mouth, alimentation should be commenced by way of the rectum.

The next question was, What was the proper substance to use for the purpose? That which Dr. Peaslee had employed extensively was prepared as follows. Crush or grind a pound of beef-muscle fine; to that add one pint of *cold* water; allow it to macerate three-fourths of an hour, and then gradually raise it to the boiling point; allow it to boil for *two minutes*—no more—and then strain. Dr. Peaslee had sustained a woman ten days by means of injections of beef-tea prepared in that manner, and by beef-tea alone. It should be prepared exactly in the manner described, if all the nutritive elements in the beef were to be obtained. Since the introduction of Leube's pancreatic emulsion, he had employed that preparation. How far up should the material be injected? He had placed it high up in the intestine; but, as a rule, he had not found that it remained so well as when thrown into the rectum. Ordinarily, the irritation produced when the injection was thrown high up into the colon was more than when it was simply introduced into the rectum. That did not militate against the remark made by Dr. Barker, however, because there were cases in which it was

better retained when carried high up than when left in the lowest part of the bowel.

The quantity used had been usually three or four ounces every four hours. He preferred to use four ounces and not repeat quite so often.

Dr. Peaslee did not think there was any digestion whatever of the aliment so used. It was important to distinguish between digestion and absorption. Digestion was entirely subservient to absorption. The object here, as in cases of inflammation and fever, when nutrition was sustained by food put into the stomach, was to use nutriment which was already digested, already prepared for assimilation, and which could be at once taken up by the absorbents, either in the stomach and small intestine, or in the rectum, in whichever it might be placed. Another reason for allowing the nutritive injections to remain in the rectum was, because it was much more vascular than other portions of the intestine.

If opium was combined with these injections, absorption was not at all interfered with, but the process of digestion was almost at once arrested by the administration of opium. Reference was made to a case of gastric ulcer, in which life was sustained thirty-one days by rectal alimentation.

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#### RIPPING ON THE TEMPERATURE IN INSANITY.

IN the *Allg. Zeitschrift für Psychiatrie*, Band 34, Heft 6, Dr. Ripping publishes a paper on differences in the peripheral temperature of the two sides of the body in insanity, and on the question as to the situation of the thermal centre in the cortical substance of the human brain.

In 1876, Eulenburg, after experimenting upon dogs, described certain spots in the cortical layers of the cerebrum as exercising an influence on the temperature of the body. Dr. Ludwig Ripping, of Siegburg, has since instituted a number of careful observations of the peripheral temperature of the two sides of the body in insane patients, being led to expect interesting results from the fact that the cortical substance is so frequently the seat of pathological change in insanity. He hoped, also, that the variations in temperature of the two sides of the body might sometimes prove of diagnostic value, by indicating the seat of cerebral lesion.

The observations were made in the bends of the elbow and knee-joints, also sometimes in the auditory meatus.

After giving details of a number of the observations, the author summarises the results as follows.

1. In all cases in which unilateral increase of temperature existed, there were other symptoms of neuroses, such as increased secretion of saliva, inequality of the pupils, some degree of facial paralysis or unequal perspiration on the two sides of the body.

2. In the cases which showed unilateral sweating, the increase of temperature was usually on the side opposite to that with increased perspiration.

3. In the cases where inequality of the pupils was present, the higher temperature was sometimes on the same side as the dilated pupil, and sometimes on the other.

4. In the cases in which facial paralysis existed on one side, the increase of temperature was generally upon the opposite side of the body, and only seldom upon the same side as the paralysis.

Patients suffering from various forms of insanity

were examined, but the above results hold good for all. These observations have an important bearing upon the question, whether an increase of temperature is to be regarded as due to paralysis or to overstimulation.

Eulenburg found that, by destroying certain portions of the cerebral cortex, an increase of temperature was caused in the extremities of the opposite side of the body; by slight stimulation of the same convolutions with a weak current, a temporary decrease of temperature was caused, whereas the application of a stronger current, or a long continuance of the weaker one, produced either oscillations of temperature or a slight increase.

Hitzig found that a considerable rise of temperature in the extremities of the opposite side followed superficial injuries of the cerebral convolutions.

The observations now recorded show that the increase in the peripheral temperatures was quite independent of paralytic appearances occurring in the same cases, and also that the increase of temperature is not necessarily a symptom of paralysis. Other appearances in the cases in question (for example, the augmented salivary secretion, which must be regarded as due to irritation), lead to the supposition that increased temperature is due to overstimulation and not to paralysis. The fact that the unilateral increase of temperature occasionally disappeared for days or even weeks at a time, is also in favour of this view. If the portions of cerebral cortex specified by Eulenburg and Hitzig are really the centres from which increases of temperature are determined, then the destruction or removal of these centres ought to render the increase of temperature permanent, and its subsequent disappearance should be impossible. Eulenburg himself, however, reports that after this had been done the increase of temperature disappeared after having persisted for three months.

The observation of Goltz that, even after the division of the spinal cord, the division and notching of the sciatic nerve causes a rise of temperature in the leg supplied by it, makes it probable that the thermal centres are not situated in the cerebral cortex at all, but in the medullary fibres lying beneath. This last supposition is favoured by the fact that increase of temperature is only produced when the current applied to the convolutions in question is a powerful one; the long duration of a high temperature after the removal of the cortical layers, might well be due to the resulting inflammation and healing process, acting as an irritant to the medullary fibres beneath.

If, however, it is still held that some portion of the cortical substance of the brain must be credited with the function of influencing the development of animal heat, it is proved by one case, which is related by the author at considerable length, that the position of this centre in man is not the same as has been indicated by Eulenburg and Hitzig for animals. Eulenburg has described the region of cerebral cortex, which is given as the motor centre for the extremities, as being also the thermal centre for the same. He regards the corresponding convolutions in the human brain to be the anterior central convolution and the frontal end of the gyrus fornicatus.

A master builder, aged 52, previously healthy, suffered from paralytic symptoms pointing to a circumscribed local disease in the right cerebral hemisphere; he afterwards had various delusions and hallucinations. The observations of his peripheral temperature showed that it was constantly higher in the

left extremities than in the right; also, it was higher in the left ear than in the right. Observations taken at different times gave the following results, according to the Centigrade scale.

LEFT ELBOW.	RIGHT ELBOW.	LEFT KNEE.	RIGHT KNEE.
36.15	35.9	36.15	35.9
36.45	36.2	36.6	36.4
36.7	36.35	36.45	36.2
36.55	36.4	36.8	36.5
36.8	36.6	36.8	35.7
36.35	36.2	37.1	36.6
LEFT EAR.	RIGHT EAR.		
36.9	36.5		

After death a medullary tumour, five centimètres long, two thick, and nearly five broad, was found in the posterior part of the right gyrus fornicatus, extending thence into the white substance of the hemisphere; it had completely destroyed the cortical substance in this situation. The medullary substance of the right hemisphere immediately surrounding the tumour was softened and of a yellowish-red colour; this softening, however, nowhere reached the cortical substance of any other convolutions. It was evident that the oldest part of the tumour was that situated in the gyrus fornicatus, for it showed signs of commencing degeneration in that situation. There was no abnormality, microscopic or otherwise, of the central convolutions of either side. The first frontal convolution of each hemisphere showed a moderate proliferation of nuclei, and contained a large number of small, round cells. The two hemispheres were firmly adherent in the median fissure.

The conclusion is forced upon one that, in the above case, the constant elevation of temperature on the left side had a central cause; according to Eulenburg and Hitzig, this would be looked for in the right anterior central convolution. This was, however, found quite intact, and the only region of the cortical substance exhibiting advanced degeneration was the posterior part of the right gyrus fornicatus. The conclusion is thus unavoidable, that if the thermal centre is not situated in the medullary fibres of the cerebrum, then the grey matter of the posterior part of the gyrus fornicatus is that thermal centre, or, at any rate, a part of it.

CHAS. S. W. COBBOLD, M.D.

#### SIMON ON SOME POINTS OF SCIENCE AND PRACTICE CONCERNING CANCER.

THIS formed the subject of the Annual Inaugural Address to the Midland Medical Society, at a meeting held in Birmingham, Nov. 9, 1877. A full report will be found in the *British Medical Journal*, Feb. 16, 1878. Mr. Simon uses the word "Cancer" to cover all *malignant* growths, and "Tumour" in its pathological sense, as meaning only *tumour by process of growth*. The arguments favouring the view that the so-called cancerous cachexia is the effect and not the cause of cancer, just as "secondaries" follow a local cause, are fairly and fully stated, and due honour is rendered to the researches of Messrs. Sibley, Moore, and Campbell de Morgan. The change of views among the pathologists in the last thirty years regarding the anatomy of cancer is shown to be no less striking than that of the evolutionists. In the early days of histology "Cancer-



cells" were, by many, considered characteristic of malignancy; against this view Virchow thoroughly protested, and since then many earnest workers have added strength to this protest, both in England and on the Continent. Each texture of the body has, so to speak, a cancer proper to itself, and in its early stage it is difficult to distinguish malignant and non-infective tumours; as they grow, however, the various cancers have morphological characters in common, their textural elements remain more or less immature; and in some cases they exhibit a marked reversion to very early embryonic types. Anatomy has hitherto contributed little to the explanation of cancer.

The study of the etiology of cancer, fraught as it is with extreme difficulty, is, Mr. Simon thinks, likely to be greatly encouraged by recent advances in the etiology of tubercle. The hereditariness of cancerous and non-cancerous tumours is shown to present many points in common. Irritation of a part is well known to bear in many cases a distinct relation to the formation of cancer, but seldom to simple hypertrophic tumour formation. Infectiousness, Mr. Simon shows, marks the identity of the disease. The process in which the secondary and tertiary growths in general arise is apparently of a zymotic kind. Dr. Creighton's minute investigations show that, under the contact influence of matter from the primary cancer, the textural elements of the next affected organ pass, by successive changes of their own, into a growth of a new sort, by which, as it advances, the secondary nodules are gradually evolved into their close textural imitation of the distinctive texture of the primary disease.

The contagion of cancer, as described by Dr. Creighton, is most remarkable. The primary cancer is a definite original texture of the body, modified, it is true, yet this modified texture coming into inoculable relation with other textures of the same body compels those second textures to abandon their own textural identity, and heterologise themselves to the textural pattern of the tumour. To sum up, our etiological knowledge of cancer consists in the evidences of two forces; one, the natural growth-power of the texture, the other a power which is at least relatively foreign; and the cancer which will act zymotically on other organs, expresses the co-operation of those two powers.

Regarding treatment, Mr. Simon does not speak hopefully. To operate early is a good rule, when feasible, but Sir J. Paget's well-known statement is quoted that not one in five hundred is cured; and Mr. Simon concludes his instructive paper with an expression of hope that a specific may yet be found, and with an able *résumé* of those lines of research that may lead to so happy an end.

RICHARD NEALE, M.D.

## ANATOMY AND PHYSIOLOGY.

BOLL ON THE STRUCTURE OF MEDULLATED NERVE-FIBRES.—Prof. Franz Boll (*Atti della Reale Accademia dei Lincei*. Third Series. First Part, 1876, 1877) gives an account of some researches made by him on the above subject. The discontinuity of the medullary sheath, and its regular composition of a large number of separate segments, was discovered independently by three observers,

W. Zaverthal in Naples, H. D. Schmidt, and A. J. Lautermann. The author's attention was attracted to these structures whilst studying the electric nerves of the torpedo, and he has since made some histological observations on the subject, the results of which are given in the present paper. The nerve examined was the sciatic of full grown specimens of *rana esculenta*. This nerve, as is well known, contains ultimate fibres of different sizes. The author, however, only alludes to the thickest ones, whose diameter averages .015 millimetres, and in which the distance between any two of Ranvier's rings is about 1.5 millimetres. In each Ranvier's tract—as the author terms the portion of fibre included between two rings—he finds only *one* nucleus which is situated more or less centrally. The action of the following reagents on the fresh nerve-fibre was studied, viz., a three-fourths per cent. solution of common salt, distilled water, picrocarmine, concentrated picric acid, osmic acid, two per cent. solution of monochromate of ammonia, ten per cent. solution of sodium chloride, etc.

The author's conclusions may be thus shortly summarised.

1. In the fresh state, the substance of the axis-cylinder is of fluid or semi-fluid consistence. It does not, in all probability, during life possess the fibrillar structure attributed to it by some modern histologists.

2. The medullary sheath does not run continually from one Ranvier's ring to another, but between every two rings it is composed of a greater or less number of separate segments, which are pushed into one another like cuffs. The substance of these segments is in the fresh state very highly refractive, and is perfectly homogeneous and structureless. In contact with heterogeneous fluids, it changes almost immediately, and shows sometimes after the action of certain reagents very characteristic figures (a fibrillar structure, "with distilled water and rods," on treatment with perosmic acid or monochromate of ammonia), which cannot, however, be regarded as preformed structures.

3. The sheath of Schwann forms a perfectly closed tube, which surrounds the axis-cylinder and medullary sheath. It presents no intervals, not even at Ranvier's rings, at which point it appears rather to be thickened. E. CRESSWELL BABER, M.B.

MARSHALL ON THE DEVELOPMENT OF THE CRANIAL NERVES IN THE CHICK.—The development of the cranial nerves from their earliest appearance forms the subject of this valuable article. The preparation of the embryo for section cutting and staining was accomplished by the methods advocated by Foster and Balfour in their *Elements of Embryology*. Dr. Marshall (*Quart. Journal Micros. Sci.*) commences with a description of an embryo of twenty-two hours, in which the earliest indication of nerves occurs as a ridge of spherical cells occupying the angle of inflection of the epiblast to form the neural canal. This ridge he proposes to term the *neural ridge*. As this formation appears *before* closure of the canal, the ridges of the two sides are originally independent of each other, and they are found to be not directly developed from the external epiblast or neural canal, but from the angle of inflection, its first appearance being in the region of the mid-brain. At twenty-four hours there is no trace of a neural ridge at the anterior part of the fore-brain, but it forms a prominent object opposite the optic vesicles; and at the widest part of the mid-brain, where the medullary folds have coalesced, the

two ridges have united into a single layer, again appearing as a double ridge along the hind brain. Complete separation of the neural ridge from the external epiblast occurs simultaneously with the closure of the neural canal, and prominences of the ridge opposite the wider portion of the mid and hind brains indicate the earliest commencement of individual nerves. At a later period (forty-three hours) the ridge is greatly reduced in size along the mid-brain, and at the constrictions between the mid-brain and the fore and hind brains the ridge has completely disappeared. Proceeding with the developmental history of each cranial nerve in order, Dr. Marshall prefaces his remarks by the decided statement that no other structures except nerves originate from the neural ridge, and that the portion intervening betwixt successive nerve rudiments develop into commissural structures. He traces the origin of the olfactory nerves from the extreme anterior end of the ridge, and finds at no period in the life of the chick the presence of an olfactory vesicle. If this nerve be regarded as the most anterior of the true cranial nerves, it must be intimately connected with the most anterior cranial segment. Do we, therefore, discover any evidence of a cleft representative of the visceral clefts over which the true segmental cranial nerves bifurcate? Dr. Marshall has satisfied himself of the close relationship existing between the olfactory organs and the gills of fish—a statement highly suggestive, and of important bearing as regards the morphology of the vertebrate skull.

The optic nerve is by no means comparable to other cranial nerves, as its origin is entirely independent of the neural ridge. The position of the third nerve on the *ventral surface* of the mid-brain presents a difficulty, explained probably by the shifting which is consequent upon the enormous growth of this region, and the arguments deduced in favour of a true cranial segmental character for this nerve are both forcible and convincing. The third nerve, according to Dr. Marshall, is the earliest nerve developed in the body. The fourth nerve arises from the mid-dorsal line, and thus does not participate in the shifting downwards which occurs in other cranial nerves. The development of the fifth nerve suggests that, as the superior and inferior maxillary are undoubtedly the primary branches of a true segmental nerve, the ophthalmic nerve probably represents the intervening portion of the neural ridge, between the fifth, the third, and olfactory nerves, developed into a permanent commissural connection. The sixth differs in arising, like the anterior spinal roots, by numerous slender filaments, and not by a large ganglionic root. It is also characterised by having no branches, and by its course at right angles to true segmental nerves. The assumption advanced is that it represents the anterior root of the seventh nerve, a conclusion antagonistic to the views of Balfour, who regards the cranial nerves as possessing no anterior root. The facial and auditory nerves arise as one outgrowth; and, as the seventh is distinctly a segmental nerve, the auditory is regarded as its branch. The glosso-pharyngeal and vagus arise from a common outgrowth of the neural ridge at the posterior part of the hind brain.

A brief description is next given of the developmental history of that portion of the neural ridge intervening between the ganglionic origin of the cranial nerves, and which has already been referred to as commissural in destination. The paper is profusely illustrated by excellent engravings, which render the description both lucid and satisfactory.

TOMES ON THE HINGED TEETH OF THE COMMON PIKE.—Mr. Charles Tomes communicates a paper on this subject to the *Quarterly Journal of the Microscopical Society*. Briefly alluding to those fish which possess movable teeth, he expresses his belief that further examination of this subject in predatory fish might probably increase the list of those possessing this peculiar type of teeth. In the pike the marginal teeth are rigidly ankylosed to the jaw, whilst three bands of teeth are disposed longitudinally down the palate, all of which are composed of hinged teeth. The central or vomerine teeth bend directly backwards, the lateral or palatine teeth backwards and inwards, at an angle of  $45^\circ$  with the median line of the mouth. Removal of pressure allows the teeth instantly to assume the erect position. It will at once be seen that such a mechanism is peculiarly suitable for preventing the escape of prey from the mouth, whilst it may prove a material aid in swallowing. Microscopically, these teeth are found to possess a pulp-cavity, permeated by rods of apparently calcified tissue, running from the dentine cap of the tooth to blend with the bony pedestal on which the tooth is mounted. In dried specimens this continuation of bands into the bone is not recognised, the sole means of connection being a hinge of fibrous tissue. Such direct connection of the base with the subjacent bone, by calcareous rods would have rendered any movement impossible, but on closer examination it was found that these filaments were calcified only at their extremities, the intermediate portion remaining soft and highly elastic. In the ankylosed teeth these rods calcify throughout, and obliterate the central pulp-cavity; and thus the structure, which is made use of to rigidly fix the one, is, by a partial arrest of development, made to play the part of an elastic spring in the other. In the angler and hake, the elasticity resides solely in the tissue of the hinge; in the pike, the bundles of fibres traversing the pulp-cavity are alone elastic.

LANKESTER ON THE BLOOD-CORPUSCLES OF THE EARTHWORM.—In the *Quarterly Journal of the Microscopical Society*, Mr. Ray Lankester retracts a former opinion expressed by him, and held by numerous authorities, that no corpuscles are recognisable in the red vascular fluid of the earthworm. He briefly reviews the opinions of Claparède, Gegenbaur, Huxley, and Rolleston, on this point, and proceeds to describe as constant elements of the red blood, certain flattened fusiform corpuscles, usually broader at one end than the other, sometimes nearly circular, the large majority measuring  $\frac{1}{3000}$ th of an inch in their long diameter. They have a clean sharp outline, are perfectly colourless, and stain feebly by treatment with dilute osmic acid, followed by picric acid. They contain a small central granule, which stains deeply, and are regarded as nuclei set free from the epithelioid elements lining the vascular walls, the central granule representing the nucleolus. They are readily distinguished from the lymph-corpuscles of the perienteric fluid, which are large, colourless, vacuolated, and contain a large nucleus, whilst their outline is ragged, and often exhibits filamentous extensions. Their small size and delicate structure suffice to conceal them in the red coloured medium in which they float, unless very special attention is given to the examination.

BEVAN LEWIS.

CAPRANICA ON THE ROUGE OF THE RETINA (SEHROTH).—M. Capranica (*Annales d'Oculistique*,



September and October 1877), has studied the colouring matter of the yellow bodies which are found in the pigmentary layer of the retina of the frog. According to the researches of Boll, this colouring matter is in all probability the same from which the retinal rouge is resupplied when it has been exhausted by the action of light. The material contained in these yellow globules is insoluble in water and in alkaline solutions, and equally so in acid and neutral solutions; but it is readily soluble in various forms of alcohol, in ether, chloroform, and sulphide of carbon. All these solutions become yellow, with the exception of that in sulphide of carbon, which resembles that of the retinal rouge. The yellow globules give three characteristic reactions. 1. Concentrated sulphuric acid produces instantaneously a splendid dark violet tint, rapidly changing to blue. 2. Concentrated nitric acid produces a greenish blue solution, which rapidly becomes colourless. 3. A solution of iodine changes their colour to a beautiful green. Exactly the same reactions are obtained from the red and yellow globules which are found within the rods and cones of birds and reptiles. The perfect analogy which exists between the reactions of the two sets of globules shows, almost beyond doubt, that the chemical constitution of the colouring matter in each is identical. M. Capranica has submitted the colouring material to spectroscopic analysis, and he has succeeded in obtaining identical absorption-bands from the two varieties of solutions. The solutions themselves become almost or completely colourless by exposure to daylight. It is a very remarkable occurrence that the colouring matter of these globules presents a complete analogy, both chemical and spectroscopic, with the substance which Hoppe-Seyler and Thudichum have described under the name of luteine, and which has been found in the ovaries of mammalia, in the yolk of egg, in the serum of blood, and elsewhere. M. Capranica has extracted the colouring matter from the ovaries of cows in the shape of microscopic crystals, with which he has obtained the three characteristic reactions of the retinal globules, and the same phenomena of solubility; the spectroscopic appearances are also the same. Precisely the same results are to be obtained from the examination of the yolk of egg.

In short, the researches of Capranica appear to show that even within the egg there exists a colouring material destined to find a home within the retina, and to render the latter sensitive to the most refrangible rays of solar light. The difficulty in ascertaining the exact chemical composition of this substance is great, inasmuch as it is associated with much fatty material, from which it cannot readily be separated. Its sensitiveness to light appears to be in the inverse ratio to the amount of fat with which it is associated. For instance, the yellow of the egg, the most rich in fat, is the least sensitive to light; that of the ovary is the most sensitive, while the reddish-yellow of the retinal globules holds a mid-position.

Although the erythropsine of Boll has a greater photo-chemical sensibility than luteine, yet M. Capranica does not hesitate to assume a very intimate relationship between the two substances, and thinks it will, ere long, be possible to show that the retinal rouge is only a chemical derivative from luteine, from which indeed it differs only by possessing a less density, which may perhaps explain its greater sensitiveness to the action of light.

BOWATER J. VERNON.

LOEWE ON THE EXISTENCE OF A LYMPHATIC

SPACE IN THE POSTERIOR THIRD OF THE VITREOUS BODY.—In a preliminary communication to the *Centralblatt für die Medicin. Wissenschaften* (March 2), Dr. L. Loewe says that in the posterior third of the normal adult human eye there is a comparatively large space filled with lymphatic fluid, which may be called the "posterior cavity of the vitreous body", or, perhaps, the "third chamber of the eye". It is bounded behind by the hyaloid membrane, in front by the vitreous body. The latter is traversed by partitions like those of an orange, and the fluid in the posterior cavity communicates with little collections of fluid between these partitions.

The process of development is as follows. In early childhood the vitreous body becomes adherent to the retina, and the embryonic chasm between these two structures completely disappears. At the same time, a new circular cleft is formed in the peripheral zone of the hitherto compact tissue of the vitreous body. It is not identical with the posterior cavity of the vitreous body, which does not appear till later. By the circular cleft, the most external part of the periphery of the vitreous body is separated from the remaining portion, and remains connected with the retina as the *membrana limitans interna*.

The posterior cavity of the vitreous body is formed several years later by liquefaction of the tissue. In it the seat of many entoptic phenomena is to be sought. It is also the source, through excessive distension, especially in old persons, of the so-called separation of the vitreous body. It is normally present in all healthy adult human eyes.

A. HENRY, M.D.

CRUSE ON THE CONDITION OF THE URINE IN SUCKLINGS.—The following are the conclusions drawn by the author of a long and valuable paper on this subject in the *Fährbuch für Kinderheilkunde*, Band xi, Heft. 4).

1. The absolute quantity of the urine increases from the second to the tenth day quickly; from the tenth to the sixtieth day, slowly.

2. On the contrary, the specific gravity and the percentage of important constituents diminish up to about the tenth day rapidly; after that, scarcely perceptibly. Phosphoric acid is an exception, for it increases with age.

3. The quantity of urine, and of its more important constituents, compared with the body-weight, increases rapidly from the second to the fifth or tenth day. It then remains at about the highest point reached until the sixtieth day. Chloride of sodium is an exception, for it diminishes after the tenth day.

4. Between the fifth and tenth days the urine is mostly turbid, often dark, and its reaction generally acid. After the tenth day it is always clear, and its colour straw-yellow, with usually a neutral reaction.

5. Albumen is frequently present up to the tenth day, but never afterwards.

6. The quality of the urine commonly varies a good deal between the second and tenth days; after this it is more constant.

7. Besides age, the secretion is influenced by body-weight. The absolute quantity for twenty-four hours is in direct ratio, the quantity pro kilogramme is in indirect ratio to the body-weight. On the contrary, both the absolute and the relative quantity of urea and of sodium-chloride are in direct ratio to the body-weight. The specific gravity of the urine and (in the first ten days) the colouring matter are increased with increasing weight.

8. Compared with the secretion of adults, the

quantity in proportion to body-weight secreted in twenty-four hours is three-and-a-half or four times greater; while the quantity of the more important urinary constituents, reckoned in the same way, is one-and-a-half to three-and-a-half times less. Of these, the secretion of urea in sucklings is least diminished; that of phosphoric acid most so.

RALPH W. LEFTWICH, M.D.

#### RECENT PAPERS.

- Note on the Functions of the Ganglionic Centres of the Heart. By M. L. Ranvier. (*Gazette Médicale de Paris*, Feb. 16.)  
 On the Innervation of the Sweat-Glands. By F. Nawrocki. (*Centralblatt für die Medicin. Wissenschaften*, Jan. 5 and 12.)  
 On Laryngostroboscopy, a New Method of Examining the Larynx. By Dr. Oertel. (*Ibid.*, Feb. 2 and 9.)  
 Researches on the Sensory Nerves of Muscles. By N. Kowalewsky and J. Nawrocki. (*Ibid.*, March 2.)  
 On the Signification of the Segments in Vertebrate and Invertebrate Animals, with Remarks on the Vertebral Column of Man. By H. von Ihering. (*Ibid.*)  
 The Physiology of the Secretion of Sweat. By Dr. R. Luchsinger. (*Ibid.*)  
 Researches on the Action of Curare, Guanidin, and Veratrin on the Living Muscles of Warm-blooded Animals. By Drs. Rossbach and Clostersneyer. (*Verhandlungen der Physikal.-Medicin. Gesellschaft in Würzburg*, Neue Folge, Band xi, 3 and 4 Heft., 1877.)  
 On Fatigue and Recovery of Striated Muscles in Cold and Warm-blooded Animals. By Drs. Rossbach and Harteneck. (*Ibid.*)  
 On the Development of the Walls of the Stomach and Intestines. By E. Brand. (*Ibid.*)  
 Anatomico-Mechanical Studies of the Shoulder-Muscles. Part II. By A. E. Fick and E. Weber. (*Ibid.*)

#### MEDICINE.

##### HAMMER ON THE DIAGNOSIS OF THROMBOTIC OCCLUSION OF ONE OF THE CORONARY ARTERIES.

—Dr. A. Hammer, Professor of Surgery at St. Louis, at present at Vienna, publishes in the *Wiener Medizinische Wochenschrift* (February 2) an account of a case in which the above condition was diagnosed and verified by *post mortem* examination. The man, 34 years old, strongly built, had for the past year suffered from slight attacks of articular rheumatism, but no valvular affection of the heart had occurred. For four weeks previously to his being seen by Dr. Hammer, a very sharp attack of acute rheumatism had existed, but had gradually improved, and convalescence was proceeding. One day he got out of bed, and sat in an easy chair. In about an hour he suddenly collapsed, his pulse was 40, his lips pale and a little cyanotic; there was slight dyspnoea, but no pain. Five hours later his pulse beat only 23 to the minute, four hours later 16 to the minute; and when Dr. Hammer arrived (the previous observations having been made by the family medical attendant) the pulse was only 8 to the minute, a cardiac contraction occurring every eight seconds. There were no symptoms or signs of disease in the nervous or respiratory systems; percussion of the precordia showed no abnormal dullness. On auscultating the heart, the sounds were not accompanied or replaced by any murmur, but following them there was a tremor of the heart perceptible to the ear, conveying the idea of a clonic spasm, which lasted five seconds, the cardiac sounds occupying one second, and the spasm being followed by two seconds of absolute rest. These phenomena were followed for twenty minutes, and were quite regular and without variation. Examination of the abdominal viscera and of the cervical region gave negative results. In arriving at his diagnosis Dr. Hammer was able to exclude fatty degeneration and

enfeeblement of the heart by the physical signs, although perhaps at present we are not in a position to define exactly the signs of these affections. Alterations of innervation, he says, were contra-indicated by the absence of all evidence of change in the central nervous organs, or in the cervical nerves; of an acute infectious disease there was no evidence; the percussion of the heart and the examination of the thorax generally negated the idea of any altered relations of pressure or of any organic affection of the heart such as myocarditis, endocarditis, hypertrophy, atrophy, or valvular disease. The striking feature in the case was the suddenness of the collapse, which pointed to a sudden interference with the nutrition of the heart, possibly to thrombotic occlusion of the coronary arteries; further consideration convinced him that, though this was probable, only one artery could have been occluded, or the heart would have come to a stop altogether, while the regular tumultuous heart-spasm of five seconds' duration pointed to a one-sided affection. The affected side acted as a dead weight to the organ, and impeded the movements of the sound half; but whether the affected side was right or left no conjecture seemed possible. Dr. Hammer accordingly made his diagnosis, much to the astonishment of his colleague. The patient died nineteen hours afterwards; and, leave to make a partial examination of the body having with difficulty been obtained, the thorax was opened. The lungs were engorged and oedematous; the pericardium contained half an ounce of clear serum; the heart was of normal size and appearance, and lay in its proper position, fully distended. Its surface was smooth and shining, and, except a layer of fat in the coronary sulci, there was no trace of fatty or other infiltration. On removing the heart, they found the right auricle and ventricle full of clot, the cavities and valves normal; the muscular wall and endocardium were also normal. The left side of the heart was equally so, except the aortic valves. In these latter the most striking appearance was the distension of the right cusp by a mass which nearly filled the right sinus of Valsalva, and was of a hemispherical shape. The superficial layers of this mass, followed into the coronary artery, were recent coagulated, yellowish white blood-clot, but downwards from the coronary artery the clot became darker, drier, and finally of a grey-reddish colour. From the lowest layer a fine thread about an inch long passed, to become connected with the new growths about to be described. The aortic valves were not thickened, but the hinder cusp was united to the right and left cusps at their commissures for a short distance. Involving these attachments and the three-cornered part of the wall of the aorta immediately subjacent, were fresh, soft, whitish excrescences, which, with the slight adhesion of the valves, caused a partial stenosis of the aortic orifice. From the apex of one of these vegetations situated between the posterior and right cusps there was a slender prolongation, which was continuous with the fine thread-like process from the clot in the sinus of Valsalva.

Dr. Hammer says he has not been able to meet with an account of such a case in literature, nor has he found that the great clinicians, Bamberger and Kussmaul, with whom he has discussed the case, have had any similar experiences.

LAVERAN ON THROMBOSIS OF A CORONARY ARTERY.—M. Laveran (*L'Union Médicale*, Feb. 23, 1878) reports a case of infarctus of the heart fol-



lowing thrombosis of a coronary artery. The following is a summary of his paper.

R., male, unmarried, was admitted Nov. 7th, 1877, with orthopnoea and hæmoptysis. A month previously he caught cold, followed by cough, which did not keep him in bed; five days before admission, he felt a severe pain in the side, which he could not precisely localise, but which had disappeared at the time of admission; at the same time his respiration became embarrassed, which speedily increased to orthopnoea. On November 8th he was sitting up in bed, breathing rapidly; his nose, lips, and ends of the toes and fingers were cyanosed; there was no œdema of the lower limbs; the percussion-sound of the chest was normal; there were mucous râles at the base of the left lung; the impulse of the heart was forcible; the area of dulness was increased; the heart-sounds were muffled, distant; no murmur; the heart's action was rapid; the pulse was frequent, compressible, irregular; the sputa were blood-stained. The diagnosis was pericarditis. He died on November 22nd. The only changes to be noted were diminution in the audibility of the heart-sound; increase of the râles over the chest, hæmoptysis, and dyspnoea as the fatal termination was approached.

The necropsy was made on November 24th. There was no anasarca present. The pleural cavities were dry. The left lung was adherent above and behind. There were numerous hæmorrhagic infarcts in both lungs; the pulmonary tissue was infiltrated with blood; there was no cavity filled with liquid blood or clots; the pulmonary vessels, whether near the hæmorrhagic foci or not, were obliterated by old clots; blood was found in the trachea and bronchi. The pericardium was dry; there were no adhesions, no false membranes. There was a milk spot on the anterior surface of the heart. The heart was very large, measuring 17 centimètres ( $6\frac{1}{2}$  inches) from the base of the ventricles to the apex, 14 centimètres ( $5\frac{1}{2}$  inches) at the base of ventricles; when empty, its weight was 930 grammes (about 2lbs. 10z.) Both ventricles were full of black clotted blood; the left ventricle occupied four-fifths of the area of a transverse section; the maximum thickness of the muscle of the left ventricle was 3 to 4 centimètres. A yellowish white patch, extruding through nearly the whole thickness of the myocardium, occupied the left border of the heart; the myocardium was elsewhere healthy, not fatty. Some white fibrinous, tolerably resistant, clots were found in the right auricle. On inspecting the inner surface of the left ventricle, after removing the clots, numerous pale patches were visible, on scraping which a brownish semi-liquid matter escaped; the whitish patch seen externally formed part of the peripheral zone of these abscesses of the heart; there were dots of ecchymotic redness on the pale patches. The aorta was dilated and slightly atheromatous; the valves were incompetent; there was a calcareous plate as large as a lentil at the base of one of the cusps, which prevented its complete extension. The segments of the mitral valve were indurated in places; their function was apparently normal. There was no lesion of the orifices of the right heart. The posterior coronary artery presented some atheromatous patches, but was permeable. The anterior coronary artery was permeable in the first part of its course—but notably enlarged; there were many atheromatous patches on its inner surface; at the part corresponding to the middle of the ventricle the artery was completely obliterated, felt like a round hard cord, and contained a hard, white, ramified, evi-

dently old, clot. The arterial wall at the seat of the thrombus was very atheromatous. The diseased parts of the myocardium corresponded exactly to the obliterated vessel. The liver was nutmeggy; the spleen small and hard. The kidneys were slightly granular. The cerebral arteries were atheromatous.

ROBERT SAUNDEY, M.D.

SELLERBECK ON THE SIMULATION OF FEVER.—Dr. Sellerbeck (*Berliner Klin. Wochenschrift*, January 21) read a communication before the Society of the Physicians of the Charité in Berlin, on the case of a patient who had for a whole year been in the Charité under treatment for gastric ulcer following an attempt at suicide by means of lye. Throughout its course the case was marked by obstinate vomiting, and the matters vomited were tinged with blood or mixed with blood-coagula. The source of this bleeding could not be determined. Some tenderness and slight bulging were noted in the epigastric region. At various times there occurred, without any assignable cause, exacerbations of temperature, reaching to 102.9°, with a pulse of 120, and respiration 24. All conceivable means to stop the hæmatemesis were unavailing. The otherwise healthy and well-nourished appearance of the patient led to a suspicion of deception, or, at least, of artificial exaggeration of the symptoms. Even thus it was difficult to account for the high temperatures, which were taken and registered by an experienced and trustworthy nurse. The temperature in the axilla ranged from 100° F. to 102.7° F., the exacerbations occurring sometimes in the morning, then again in the evening, or lasting some time, as in continued fever. In order to test the matter, when on one occasion the axillary temperature stood at 101.3° F., a thermometer was placed in the rectum, which was found to mark only 100° F., thus proving the existence of trickery somewhere. Acting under this new light it was shown without difficulty, in the presence of the patient, that by means of a rapid rotating movement of the bulb between the thumb and fingers, or between two folds of linen, the mercurial column could be raised, so as to indicate a high fever-temperature. The patient at first totally denied the charge of practising any deception, but was presently brought to confess that, in order to excite greater interest in her case, she had managed, when the thermometer was placed in her axilla, to enclose the bulb in a fold of her linen, and then, by firmly pressing it between the arm and thorax and rapidly rubbing it up and down, she raised the column to the excessive height observed. When once the deception was discovered, she took a lively interest, after the true manner of hysteria, in the experiments that were made to ascertain the height to which the thermometer could be thus artificially raised. It was as a result found that by tightly enclosing the bulb in a fold of her linen and then rapidly rotating it in a spiral manner, the temperature could be easily raised to 114.8° F. On stopping this rubbing, the column at first fell rapidly to 100° F. to 103° F., where it then remained almost stationary for several minutes. Friction between the bare skin of the arm and thorax had less effect in raising the temperature, owing probably to the cooling effect of the slightly moist surfaces and the greater difficulty of rapid rubbing. Yet even thus, in about three minutes, a height of 108° F. could be attained.

[Until within the last three years the errors of clinical measurements of temperature were supposed

to lie only on the side of deficiency from improper methods of observation. About that time, Mr. Teale, of Scarborough, reported a case of the excessively high temperature of 122° F. (*Brit. Med. Journal*, March 6th, 1875). The various theories advanced to account for this naturally impossible temperature, such as that of secreted hot water bottles or mechanical pressure on the bulb, were insufficient. Schliep subsequently, in another case, hit upon the explanation that it was possible to raise the temperature by rubbing the thermometer bulb between the thumb and fingers. Deception is specially easy in this way with self-registering index thermometers. But the foregoing seems to be the first recorded case where the patient successfully simulated fever by this means, and also reproduced in a striking manner the symptoms of increased frequency of the pulse respiration, and then acknowledged having done so.—*Ref.*]

**KELP ON HÆMORRHAGE FROM THE MOUTH WITH CEREBRAL DISEASE.**—Dr. Kelp communicates the following case (*Betz's Memorabilien*, xxii Jahrgang, Heft 12). A. S., a seamstress, thirty years of age, insane in consequence of several apoplectic attacks, was an inmate for eleven months of the asylum at Wehen. Her constitution was weak generally. On the right cheek was a nævus 5.2 inches long and 3½ inches wide. The power of her limbs was not impaired. There was no anæsthesia, but the tongue was paralysed, and there was aphasia. After eleven months there came on suddenly during the night copious hæmorrhage from the mouth, which continued for thirty-six hours and attained the large quantity of 3 litres (5.3 pints). The blood was not coughed up nor vomited, but flowed quietly from the anterior gums and the back of the tongue, nor could its precise source be discovered. There was no oppression of the chest; no cough, nausea, or hiccup. The blood was thin, fluid, bright red, and frothy, largely mixed with saliva and mucus; no abrasion or injury of the mouth could be found. Acids and astringents had no influence on the hæmorrhage, which ceased spontaneously on the second day, and the patient, although at first much prostrated by the loss of blood, recovered under a nutritive diet and the use of tincture of iron. The hæmorrhage appeared to be of the same nature as that which occurs in "bleeders", in whom, though at first caused by external injuries, it afterwards often occurs spontaneously.

**SCHEBY-BUCH ON A CASE OF SUBACUTE FARINOMA IN MAN.**—Dr. Scheby-Buch, of Hamburg, reports the following case of farcy, or glanders, in the *Berliner Klinische Wochenschrift* for February 11. The patient, a well-built, muscular man, thirty-one years of age, was seized with shivering and subsequent heat. A small pimple then appeared on the throat, and in a couple of days increased to the size of a fist and became very painful. A fortnight afterwards several hard swelling-like knots appeared on the face; the eyes inflamed, and began to discharge a muco-purulent secretion; the nostrils became encrusted, and cough set in. This was followed by pains in the muscles and joints, and an eruption of pustules on the chest and thighs; a swelling formed on the left wrist, and began to suppurate, as did also the swelling on the throat; the patient lost appetite, and became very weak, the voice husky, and the pustules increased in size and number. When seen on the 13th May 1877, the

patient presented the following condition. On the throat was a large swelling, discharging pus from numerous small openings; a similar but smaller swelling existed on the left side of the neck. Scattered over the head and face were numerous pustules, varying in size from a pea to a filbert, and having a hard, inflamed, and painful base. The eyelids were glued together with a purulent secretion; the nostrils were entirely closed by dark brown cysts, under which, when removed, the nasal mucous membrane appeared red, swelled, and dotted with pustules. The tongue was swollen, and covered with a thick dark coating, and with numerous pustules, which appeared also to spread into the throat, as indicated by the hoarse husky voice; the cervical glands were hard and enlarged, and pustules varying in size up to that of a filbert existed on the chest and abdomen. Near the left wrist there was a suppurating ulcer with hard edges, of the size of half a crown. The urine was scanty, reddish brown, without albumen; pulse 110, small and weak; temperature, 99.5°, F.; skin cool, covered with clammy sweat; bowels confined. A free incision was made into the swelling on the throat, which bled freely, and discharged but little pus. During the next three days, the patient grew rapidly worse. There was a striking increase of reflex irritability, so that an unexpected touch caused convulsive starting, as in strychnine poisoning. A further suppurating swelling as large as a walnut formed on the right side of the neck. He became delirious, with increased prostration and apathy, and died on May 16. A necropsy could not be obtained. There were reasons for suspecting the patient to have been infected by a diseased horse, but this could not be confirmed. A cat was inoculated with some of the purulent discharge, but without result. The case was evidently one of blood-poisoning, and presented the usual characters of glanders, though the exalted reflex irritability does not seem to have been observed before.

W. J. TREUTLER, M.B.

**GAREL ON FACIAL ASYMMETRY IN EPILEPSY.**—Not long ago, M. Lasègue adduced a series of observations in support of the opinion that asymmetry in the upper part of the face is common in epilepsy, and that its existence shows that the epilepsy is the result of a malformation, and that the commencement of the disease corresponds to the period of life in which consolidation of the bones takes place (*Annales Médico-psychologiques*, September 1877). M. J. Garel (*Lyon Médicale*, Jan. 1878) has examined a large number of epileptics, with the view of ascertaining the correctness of M. Lasègue's facts and conclusions. He finds that facial asymmetry is present in a large number of cases of epilepsy, but that it cannot be accepted as an indication of the time at which the epilepsy commenced. From a comparison of a number of epileptics and healthy persons, he found each variety of facial asymmetry more common in the former than in the latter, although in several forms the difference is not great. The following table presents the frequency of each form.

	EPILEPTICS.	NON-EPILEPTICS.
Frontal prominence	... 57 per cent.	... 51 per cent.
Malar prominence	... 53 "	... 31 "
Rotation of the face	... 49 "	... 39 "
Deformation of palate	... 32 "	... 23 "
Flatness of oneside of face	71 "	51 "
Orbital level	... 35 "	... 47 "

An opportunity of ascertaining, on a large scale, the frequency of frontal asymmetry among persons



not epileptic was afforded by the tracings of the circumference of the head taken by hatters. M. Garel examined 255 of these, and found that 57 per cent. presented frontal asymmetry, and the right frontal eminence was the more prominent in three quarters of these cases. [It is to be noted that this proportion of 57 per cent. is precisely that which was found to obtain among epileptics. This circumstance throws considerable doubt on the significance of M. Garel's statistics.—*Rep.*] Palatine deformity was found in about one-third of epileptics, and was various in form. It is remarkable, however, that the V-shaped maxilla, common in idiots, was met with very rarely in epileptics. The conclusions are drawn that the facial asymmetry indicates a form of epilepsy of great gravity, due to serious organic change in the brain, and almost necessarily incurable.

[Such a conclusion seems scarcely warranted by the facts adduced.—*Rep.*]

W. R. GOWERS, M.D.

ENGELKEN ON TWO CASES OF EPILEPSY.—In the *Zeitschrift für Psychiatrie*, Band 34, Heft 6, a paper by Dr. Engelken is reported, in which are related the histories of two cases of epilepsy; the chief point of interest in them being the fact that both patients at certain times saw the objects around them apparently doubled in size.

1. A nice-looking girl, aged 20, has been epileptic eight years, but was previously quite healthy. For about a year she has been subject, between the fits or instead of them, to attacks of restlessness, with various unpleasant general sensations, also dizziness. At these times it frequently happens that all surrounding objects appear to her to be two or three times their natural size. She sees no other alteration in them (*e.g.*, in colour, quality, etc.), and she has no other disturbances of perception or of the special senses. Mentally, she has exhibited the usual steadily increasing irritability and sensitivity of epileptics, and latterly has had a sharp maniacal attack, with lascivious tendencies.

2. A powerful man, aged 49, formerly a coachman, and perfectly healthy, without hereditary taint, became suddenly epileptic four years ago on hearing of the sudden death of his wife, and has since had from eight to twenty-six fits in the twenty-four hours. His memory is greatly impaired, but the frequency of the fits and the giddiness of which he often complained previously have been much diminished by bromide of potassium. Giddiness occurs now only as an aura in combination with noises in the ears. A different aura from this is, however, much more frequent; it lasts from five to ten minutes, and consists in the patient's seeing all persons and objects around him as if they were greatly enlarged, somewhere about double their real size. The objects do not appear altered in any other way. The two kinds of aura change about irregularly, and occasionally take the place of epileptic attacks. The symptom of seeing objects magnified has lasted about a year, and has diminished somewhat under the treatment by the bromide of potassium. The eye is perfectly normal; hearing is unaffected, but the sense of smell is almost lost. At times, especially just before a fit, the sense of taste is greatly diminished. During the administration of the bromide, the number of fits in the day has once been as low as two. The patient is robust, and works out of doors; his intellect is clear, with the exception of his weakness of memory, especially for names and faces. Previously,

his memory for these had been very good. His appetite is good, and not increased; but his pulse is always slow, viz., about 52 per minute.

CHAS. S. W. COBBOLD, M.D.

EPIFANI ON A CASE OF SYPHILITIC DISEASE OF THE MEDULLA OBLONGATA.—Dr. Giuseppe Epifani relates the following case in the *Morgagni* for July 1877.

A butcher, aged 24, who had previously had good health, first had constitutional syphilis in the beginning of 1875. On February 15, 1876, he came to Dr. Epifani, complaining of general *malaise*, loss of appetite, and a disagreeable taste. On examination, his nutrition was found to be somewhat impaired, the skin had an earthy colour, and the tongue was covered with a white adherent coating. Matters remained in nearly the same state until March 10, when he was attacked with intense thirst and polyuria, the amount in urine passed in twenty-four hours being in a few days as much as ten litres (17½ pints). A careful analysis of the urine detected only a relative diminution of the solid constituents. About a week after the commencement of the diabetes he began to have a headache, affecting chiefly the front of the head and the temporal regions; it was at first more troublesome on the right side, and afterwards on the left; it began at 10 a.m. and increased in the evening and night. There was also a sense of dragging in the right eye, slight external squint, contraction of the eyelids, and weakness of vision. These symptoms appeared when the headache had lasted six days. The pulse on March 25 was 80 and the temperature 37° cent. (97.6° Fahr.); the next day the former fell to 62 and the latter to 35° cent. (95° Fahr.).

A consideration of the symptoms led Dr. Epifani to conclude that the disease was situated in the medulla oblongata, and that it was of syphilitic nature.

The treatment consisted first in the administration of mild purgatives and alkaline carbonates; gallic acid (a drachm in twenty-four hours) and tannin were given for the polyuria; afterwards quinine and bromide of potassium to relieve the headache; and at last iodide of potassium was given in increasing doses, with nutritious diet. Under this treatment the symptoms gradually disappeared, and the patient was discharged cured on May 23.

A. HENRY, M.D.

FRANCK AND BELLOUARD ON THE DIAGNOSTIC VALUE OF THE RADIAL PULSE IN INNOMINATE ANEURISM.—The radial pulse below an aneurismal tumour generally presents two peculiarities of great diagnostic value; firstly, diminished fulness; secondly, a delay in point of time as compared with the pulse of the opposite wrist. By reason of its greater constancy, the second of these, the delay, is by far the more important of the two. A case of innominate aneurism examined by Dr. Panas shows of how little value is diminished fulness regarded as a symptom, for the radial pulse below the aneurism showed considerable fulness, whereas the left pulse was so small as hardly to be appreciable by the sphygmograph. M. Bucquoy mentions a similar case. A careful examination of the circulatory disturbances of the arm, face, and fundus of the right eye, led these two observers to attribute the increase of fulness in the instances just alluded to, to vaso motor paralysis consequent upon functional derangement of the first thoracic ganglion of the sympa-

thetic, due to compression by the largely developed aneurismal tumour. In a patient with innominate aneurism mentioned by M. Bellouard, a slight sinking in of the globe of the right eye, a decided diminution in the palpebral orifice, and a well-marked excavation of the optic disc were observable and were known to have been present for a long time. The field of vision of the affected eye was reduced to nearly zero on the nasal side, which confirmed the ophthalmoscopical appearances of the disc. There was also present a marked diminution in the acuteness of vision of the right eye as compared with the left.

This case offers an excellent opportunity for studying the relations existing between paralysis of the sympathetic, nutritive disturbances of the fundus of the eye, and partial atrophy of the papilla entailing diminution in the field and in the acuteness of vision; for there can be no doubt that in this case the ascending sympathetic filaments from the first thoracic and inferior cervical ganglia were paralysed. Those from the first thoracic ganglion supplying the vessels of the upper extremity being similarly affected, the fulness of the radial pulse is accounted for.

The sphygmographic tracings of the right pulse shown by M. Franck display a suddenness of impulse altogether absent in those of the left side. In consequence of this energetic circulation in the right upper extremity, and contrary to what one generally observes in aneurism, there was an elevation of 1° F. on the affected side, of which the patient was herself perfectly conscious.

It may therefore be concluded that the smallness of pulse and fall of temperature below an aneurism may be replaced by inverse symptoms, provided the aneurismal tumour compresses and paralyses the sympathetic ganglia or filaments concerned in that region. Again, symptoms of either kind may be altogether absent; at any rate their uncertainty and their dependence on adventitious conditions should render them of second-rate importance. Of first-rate importance is the delay of pulse which no nervous influence can suppress, though the peripheral vascular dilatation and consequent easy flow of blood in the extremity tends to render it less distinct. By means of an apparatus devised by M. Franck, he shows that during the expansion of the tumour the pulse of the right hand is delayed a third after that of the left, in the case above alluded to.

Though the absolute amount of delay varies with circumstances, and is necessarily influenced by all kinds of conditions, yet its constancy, the fact that there always is delay, however slight, renders this symptom of the very highest diagnostic value in cases of suspected innominate aneurism.

W. J. ROECKEL.

JONES ON FAILURE OF THE HEART'S POWER.—Dr. C. Handfield Jones, in a clinical lecture reported in the *Lancet*, February 23, 1878, gives a series of cases where weakened cardiac power was the chief symptom. In two of the cases tobacco-smoking appeared to be the principal cause, while in a third case snuff-taking was supposed to have some influence. Quinine, iron, and strychnia, or bark and ammonia, with judicious avoidance of exciting causes sufficed, in all but one suddenly fatal case, to relieve the distressing symptoms.

CAMPBELL ON FEEDING *versus* FASTING.—Dr. J. A. Campbell contributes a paper with this title in

the *British Medical Journal*, February 25, 1878, in which he reviews the Market Harborough and Welsh fasting cases, and offers some useful remarks regarding the mode of forcing the patient to be nourished in similar instances. Of the three modes by which patients may be fed, *per nares*, *per os*, *per anum*, he gives the preference to the use of Dr. Maclaren's India-rubber stomach-tubes *per os*.

[All practitioners must have from time to time met with cases in which the only hope of relief lay in compelling the patient to take nourishment, and few, who have tried the simple and easy plan of feeding *per nares*, will be likely to expose their patient or themselves to the annoyance or distress of using the stomach-pump. This subject was fully discussed in the various journals at the time when the Welsh fasting girl was before the public; and although one case was mentioned in which a patient had been harmlessly fed 8,700 times by the stomach-pump, still the balance of evidence was greatly in favour of the administration of food *per nares*. Dr. Zsigmondy appears to have recommended this plan as early as 1855 (*Med. Times and Gazette*, vol. 2, 1855), and those who are interested in the subject will find much information referred to in the *Medical Digest* of the New Sydenham Society, under the headings "Forcible Feeding", section 1389, 1 and 3; "Nutritive Enemata", section 886, 3; in addition to which Dr. Brown-Séquard in the *Lancet*, vol. 1, 1878, gives a case where two-thirds beef and one-third fresh porcine pancreas passed into the rectum proved most valuable.—*Rep.*] R. NEALE, M.D.

SUPPOSED CASE OF PROGRESSIVE PERNICIOUS ANÆMIA: CANCER OF STOMACH.—In the notes of practice at the Bellevue Hospital (*New York Medical Review*, January 12) it is stated that a man, who dated his sickness from the summer of 1876, was admitted to the hospital in July 1877. Physical examination at the time of admission, and subsequently, was negative with reference to all his internal organs. His peculiar pale countenance suggested examination of the blood, when it was found that there was evident diminution of the normal proportion of red corpuscles, but the white corpuscles were apparently undisturbed; there was no pigment in the blood. There was loss of digestion; the patient vomited his food occasionally, and occasionally suffered from diarrhoea. The anæmia had been progressive for a year or more when he was admitted to the hospital, and yet no satisfactory explanation of the condition could be found. There was no tumour, or pain, or vomiting of blood, or other symptom which suggested the existence of cancer of the stomach, and yet at the necropsy cancer of that organ was found.

The case was interesting from two points of view: 1. As bearing upon the existence of the disease which has received the name of progressive pernicious anæmia; and, 2, as illustrating the sparsity of symptoms which may attend the development and progress of cancer of the stomach.

LEYDEN ON ABSCESS OF THE LUNG.—In a paper read before the Berlin Medical Society (*Allgem. Medicin. Central-Zeitung*, Nov. 7, 1877) Dr. Leyden calls attention to the rarity of pulmonary abscess, and to the liability of its being confounded with pulmonary gangrene and subacute tuberculosis of the lungs (cheesy pneumonia). Traube has referred to the diagnostic importance of an examination of the sputum, and states that in it macroscopic shreds of lung-tissue might be recognised, containing elastic fibres, black



pigment, and occasional rust-coloured crystals. In gangrene, however, the shreds of pulmonary tissue are readily torn, and elastic tissue is not present, and in pulmonary tuberculosis there are no shreds. It was Traube's view that the abscess developed from pneumonia was preceded by an extensive destruction of tissue. Leyden admits that pulmonary abscess and gangrene are not sharply defined, but run into each other, and yet the recognition of the simple healthy suppuration is of the greatest importance. He considers that there are three varieties of pulmonary abscess:

1. Abscesses perforating the air-passage from without.

2. True pulmonary abscesses which include those due to pneumonia; also the embolic and metastatic forms, and those resulting from injury to the lung, and from the penetration of foreign bodies.

3. Chronic pulmonary abscesses, such as form in chronic pneumonia, but distinct from the tuberculous cavity.

True pulmonary abscess begins with symptoms of acute pneumonia. This does not terminate critically on the seventh or ninth day, but the fever increases, the expectoration is retained, till in the course of three weeks an abundant purulent sputum appears, with alleviation of all the symptoms. This sputum is of very great diagnostic importance. It is profuse, frothy, purulent, and liquid, of a stale indifferent odour, although the latter may temporarily be sweet and penetrating. Shreds of lung-tissue are seen, as well as others to be seen with the microscope. They are imbedded in thick yellow pus, are of a grayish-black or yellow-ochre colour, and vary much in size. These particles contain abundant elastic tissue, at times portions of large vessels, a moderate quantity of black pigment, crystals of fat (small, pedicellate, globular forms), delicate hæmatoidine (bilirubine) crystals of an ochre-yellow or rust colour. The latter crystals were always observed, though they might be few or many, and were in the form of rhombic plates or of bundles of needles. Coarse granular micrococci are present, either motionless or moving slowly, and differ widely from the active rod-like bacteria of pulmonary gangrene. They are not acted upon by iodine, and thus differ from the leptothrix forms in gangrene. Pus-corpuscles and pulmonary epithelium are also found.

In the chronic pulmonary abscess, the sputa are purulent or muco-purulent in character. They contain elastic fibres, which are evident on microscopical examination; also occasional small, dense, slate-coloured portions of lung-tissue of a fibrous appearance. Plates of cholesteroline also are often seen; likewise fatty and mucous corpuscles, the latter often containing granules of fat.

ELLIS ON ULCERATIVE ENDOCARDITIS.—Dr. Calvin Ellis (*Boston Medical and Surgical Journal*, November 15, 1877) reports a case of ulcerative endocarditis, followed by embolism of the arteries of the left leg, and makes the following remarks.

Though we are there informed that hardly two cases are known which resemble each other completely, our case illustrates so many points mentioned in the general history of the disease as to make it profitable to call attention to them, particularly as the affection is quite rare. The two forms described, the typhoid and the pyæmic, are both represented. The pain and prostration were followed by rigors, and these by the clear indications of local embolism. We had at first integrity of mind, ending at last in

delirium and coma; marked prostration; rapidity of respiration, contrasting strongly with the absence of all appreciable lesion of the lungs; a high pulse and temperature; rigors repeated frequently, regularly and irregularly; a cessation of the same towards the close: albuminuria, which we are told hardly ever fails; an enlarged spleen; the absence of any complaint of subjective cardiac symptoms, and of physical signs, which has been noticed even when ulceration has occurred, though physical signs are generally found. Vomiting and diarrhœa, which are common, were wanting in our case.

In regard to diagnosis, it is stated that ulcerative endocarditis can be rarely recognised with certainty. It is either entirely overlooked or only suspected. In our case, an accurate diagnosis was impossible until the obstruction of the circulation occurred. There may be local cardiac signs which render the diagnosis very probable, but where these fail the disease is liable to be confounded with typhoid and intermittent fever, or other conditions. Though the rigors often recur irregularly, perhaps several times a day, they may be so regular as to simulate those of intermittent fever, while the enlargement of the spleen may also suggest typhoid. If, however, we bear in mind the apyrexia of intermittent fever and the regular course of the temperature in typhoid, we shall be much aided in diagnosis. But the most important point is the previous history of the case. Though recovery is not impossible on theoretical grounds, no case of the kind is known.

#### RECENT PAPERS.

- On Athetosis. By M. Paul Oulmont. (*Revue Mensuelle de Médecine et de Chirurgie*, Feb. 10.)  
 On the Symptomatic Fever of Mumps. By M. A. Verneuil. (*Ibid.*)  
 Clinical Study on the Digestive Troubles observed in Patients Suffering from Urinary Diseases. By M. F. Guyon. (*Ibid.*)  
 On Scrofulous and Rheumatic Coxalgia. By M. Verneuil. (*Gazette des Hôpitaux*, Feb. 19.)  
 On Parasites and the Parasitic Diseases transmissible to Man by Butcher's Meat. By M. P. Megnin. (*Bulletin de la Société de Médecine Publique*, Feb. 1878.)  
 On Spinal Rheumatism. By M. Vallin. (*Gazette des Hôpitaux*, Feb. 12.)  
 Considerations respecting Typhoid Fever; its Treatment by Cold Baths and by Dr. Clement's Apparatus. By M. Julliard. (*Lyon Médicale*, Feb. 10.)  
 On the Influence of Pregnancy and Childbirth on the Progress of Pulmonary Phthisis. By Dr. Lebert. (*Nice Médicale*, Feb. 1.)  
 Cases of Diabetes Insipidus and the Treatment found Successful. By Dr. H. Kennedy. (*The Practitioner*, Feb. 1878.)  
 On Alternate Paralysis. By Dr. George Sigerson. (*Dublin Journal of Medical Science*, Feb. 1.)  
 Study on Râles. By Dr. Bernheim. (*Revue Médicale de l'Est*, Feb. 15.)  
 Note on a Case of Lateral Deviation of the Eyes in Paralysis Agitans. By M. Debove. (*Le Progrès Médical*, Feb. 16.)  
 On So-called Electric Chorea. By Dr. V. Cavagnis. (*Annali Universali di Medicina e Chirurgia*, February 1878.)  
 Remarks on Pleurisy and Pneumonia. By Dr. Jacobasch. (*Berliner Klinische Wochenschrift*, February 25.)  
 Case of Chronic Exudative Pleurisy Cured by Milk-Diet. By Dr. A. Curci. (*Lo Sperimentale*, February 1878.)  
 Myelogenous Leukæmia. By Dr. E. Neumann. (*Berliner Klin. Wochenschrift*, Feb. 11, 1878: March 4.)  
 On Simulated Aphasia, and its Importance in Military and Forensic Medicine. By Dr. Sidlo. (*Allgemeine Wiener Medizin. Zeitung*, Jan. 29; Feb. 5, 19, 26.)

#### SURGERY.

WITTE ON WOUNDS OF THE LARYNX.—In the concluding portion of an article on wounds of the larynx, and on prophylactic tracheotomy in such cases (*Archiv für Klinische Chirurgie*, Band xxi, Heft 1, 2, 3), Dr. Witte states that such injuries are relatively rare. In military practice their proportion

to wounds of all other parts is as five to 10,000. In civil practice they are more frequently met with. In the former class of cases the injury is almost always the result of a gunshot wound, whilst in the latter class it is usually produced by some cutting instrument. The diagnosis of a wound of the larynx is seldom attended with any difficulty. The chief symptom of a penetrating wound of the air-tube is the passage of air from the open surface. The progress of the case is usually slow; in cases of extensive wounding recovery is not, as a rule, completed in less than 35 days. It frequently happens that the healing remains imperfect, and that the patient is permanently affected with loss of voice, laryngeal stenosis, or aerial fistula. The prognosis in cases of incised wound of the air-tube, with extensive gaping of the divided parts, is very much better than that of cases in which the injury is less extensive, and the result of puncture. In cases of severe contusion, with much impairment of voice and respiration, and in those also of fracture, involving one or more of the laryngeal cartilages, prophylactic tracheotomy ought to be performed. The same operation is indicated when a foreign body is present in the air-tube, and also in all cases of gunshot wound of the larynx, of punctured wounds involving the laryngeal mucous membrane, and incised wounds attended by slight gaping of the soft parts, and at the same time with wide separation of the fragments of incised cartilage. In cases of incised wounds with much gaping of the soft parts and but slight injury of the walls of the air-tube, prophylactic tracheotomy need not be performed at once, but it is necessary that the patient be closely watched. In cases of incised wound of the hyo-thyroid membrane, and in wounds of the thyroid cartilage, the application of sutures should be preceded by prophylactic tracheotomy. In cases of gunshot of the laryngeal region, with extensive laceration of the soft parts, the trachea should be opened in order to avoid obstruction of respiration through collection of blood in the wound, and its pressure on the air-tube. In performing prophylactic tracheotomy the superior is to be preferred to the inferior operation. The earlier the date of the operation the smaller the difficulty, and the better the prognosis. When circumstances permit, and no contra-indications are presented, chloroform should be administered. A table given by the author of 30 cases in which prophylactic tracheotomy was performed in the treatment of gunshot-wound of the air-tube, shows that recovery may be expected in at least 43 per cent. of such instances.

Gunshot-wounds of the soft parts about the larynx frequently result in extension of inflammatory œdema from the oral and pharyngeal mucous membranes to that on the epiglottis and the aryteno-epiglottidean ligaments, and thence over the whole of the inner surface of the larynx. Any extensive gunshot-wound of the submaxillary region, especially when the soft parts have been much lacerated, and still more so when the projectile lies embedded near the entrance to the larynx, and cannot be removed, requires, the author states, that the surgeon should carefully consider whether there be any indications for tracheotomy. Several cases have been recorded in which death suddenly occurred after such injuries. This result might very probably have been avoided had an opening been made in good time into the trachea. In the records of 25 cases given by Dr. Otis (*Surgical History of the War of the Rebellion*), in which tracheotomy was performed after injuries to the lower part of the face, associated with extensive wounding of

the tongue, soft palate, and floor of the mouth, no mention is made of any symptom of suffocation. The author, in conclusion, insists that all cases of extensive wounds in parts near the larynx demand the greatest care in their treatment, and that recourse should be taken to prophylactic tracheotomy whenever there is any indication of œdema of the glottis, whenever speech and respiration are in the least degree impaired, and whenever there is secondary hæmorrhage, which may lead to a flow of blood into the respiratory passages, or a collection of clot around the trachea. W. JOHNSON SMITH.

FLASHAR ON CARBOLISED GUT AS A SURGICAL DRESSING.—In a communication to the *Allgemeine Medicinische Central-Zeitung* for February 17, Dr. Flashar, of Polkwitz, writes as follows.

Starting from the fact that catgut threads used for ligature are completely absorbed, it occurred to me to prepare portions of intestine in the same way as catgut, and to use them in appropriate cases as dressing. Having procured a piece of dried sheep's intestine, I cut it lengthwise, and soaked it in carbolic oil (ten per cent.)

After about six weeks, I had an opportunity of trying it in the case of a young man whose right hand had been injured by a machine. The wound, which gaped widely and penetrated the deeper tissues, extended obliquely along the surface of the hand to the middle and ring fingers, both of which were injured. The edges were torn and ragged, and the subjacent tendons were partly laid bare. After cleaning the hand and wound, I applied to the latter a large piece of the prepared intestine, still dripping with oil, in such a way as to overlap a portion of the uninjured skin. The whole was covered by a cotton-bandage and left undisturbed as long as circumstances allowed. For the first time, at the end of six days there was some offensive smell, and the patient felt a slight burning; previously to this neither pain, swelling, nor inflammation had been observed. The dressing was opened on the seventh day, and, to my astonishment, I found that the portions of intestine lying on the wound were perforated, and for the most part absorbed; the wound beneath was in an advanced state of cicatrization, so that it wanted comparatively little to complete its closure. The smell which had been perceived proceeded from the portion of intestine which lay on the sound skin; it had there assumed a whitish colour, and appeared like intestine which had been softened in water. The dressing was renewed, the sound part being left free, and in a remarkably short time the small remaining portion of the wound was healed. The cicatrix was so soft and pliable, that the vitality of the hand and fingers was not impaired in the slightest degree.

I made a second trial of the same material in a case of separation of webbed fingers in a young child. After cutting through the uniting membrane, I wrapped each finger separately in prepared intestine, and also laid a piece in the angle of the wound. Cicatrization went on equally in all parts of the wounded fingers. Unfortunately the parents, who lived in a village, were prevented by bad weather from bringing their child to me at the proper time for removing the dressing, and consequently re-adhesion took place to a trifling extent. The cicatrix was so soft, and the tissues felt so normal, that I had no fear of future contraction and stiffness. In this case also I observed that the portion of intestine which lay on the normal skin had become soft and pale.

I believe that it is absolutely necessary to soak the



intestine for a month in the carbolised oil, in order to render it fit to be used as a dressing to amputation-wounds where skin-flaps cannot be formed, or to wounds in which a great loss of substance is to be feared, especially on the skin.

SCAINI ON A ROUND-CELLED AND SPINDLE-CELLED SARCOMA OF THE LEFT SCAPULA AND HUMERUS.—The *Giornale Veneto di Scienze Mediche*, for September 1877, contains the report of a case related by Dr. Scaini to the Medical Society at Friuli.

The subject was a countryman, aged 24, of healthy constitution, who, while working in Hungary in 1875, perceived a small tumour at the insertion of the left deltoid muscle into the humerus. The tumour was hard and painful, both spontaneously and on pressure; it was movable, and did not implicate the skin. Various remedies were applied, but without effect, the tumour continuing to increase in size. In January 1877, when the patient was admitted to hospital under Dr. Scaini's care, it embraced four-fifths of the circumference of the left humerus; viz., the whole external region, the posterior, and a great part of the internal, leaving free only the part corresponding to the brachial muscle. It reached upwards to the junction of the upper and middle thirds of the deltoid muscle, and downwards as far as the middle of the humerus. It was of almost circular form, projected in the form of a fungus growth about an eighth of an inch above the level of the surrounding healthy skin, had a blackish aspect, produced by the scars left by the caustics that had been applied, and was divided into numerous lobules, soft to the touch. Under the eschar it had a greyish aspect, and bled on the slightest touch. When moved laterally, or upwards and downwards, it seemed to be scarcely adherent to the bone; during these movements the most painful part appeared to be its postero-superior portion, corresponding to the humeral attachment of the latissimus dorsi muscle. This portion was harder than the rest, and from it there passed under the spine of the left scapula a prolongation of the tumour, which occupied the whole of the infraspinous fossa; it was covered with reddened tense skin, which was livid near the shoulder joint, but did not show signs of degeneration. The tumour here was not movable like that of the arm, but was very painful, and to the touch appeared elastic and semi-fluctuating: the presence of pus was suspected, but on introducing one of the needles of Dieulafoy's apparatus, only a few drops of blood escaped. The patient suffered much, and his nutrition was considerably impaired.

The case was treated by disarticulation at the shoulder-joint, by an interior and anterior flap, no other method being possible. The operation was undisturbed by any accident, and recovery soon took place. The author attributes the rapidly favourable termination to the use of salicylic dressings, which he considers a sure preventive of erysipelas, pyæmia, and other consequences of severe operations.

NEDOPIL ON EXTIRPATION OF THE SCAPULA AND A PORTION OF THE CLAVICLE.—In the *Archiv für Klinische Chirurgie*, Band xxi, Dr. Nedopil describes a case in which this operation was performed by Dr. Billroth.

A man, aged 44, had a tumour on the scapula. It first began to give trouble three years before the patient came under treatment, and had extended into

the supraspinous and infraspinous fossæ, to the neighbourhood of the coracoid process, and into the axilla. An exploratory puncture having been made, and a portion removed, the diagnosis of myxochondroma was made.

The operation of removal was performed in the following manner. The tumour was first laid bare by an incision nearly corresponding to the median border of the scapula; from the upper end of this, a semilunar incision was carried outwards over the acromion, and then inwards and downwards over the coracoid process. It was now found that the arm could be preserved. The shoulder-joint was laid open from above, and the arm drawn out; the tumour was then separated from its muscular connections, proceeding from before backwards. As the lower angle of the scapula was sound for a length of more than three inches, it was separated by means of bone-forceps from the diseased part and preserved, while the greater part of the scapula, which was involved in the growth, as well as the acromial end of the clavicle, around which the tumour had grown, were removed. Drainage-tubes and sutures were applied, and antiseptic treatment was followed. At the end of three weeks healing was complete, except at a small granulating surface at the point of drainage. Six weeks after the operation, the head of the humerus had formed an articulation with the outer end of the clavicle and the remaining portion of the scapula, and could be actively rotated inwards and outwards, the teres major and teres minor having been preserved. The movements of the forearm and hand were powerful.

ROSSI ON A CASE OF GUNSHOT WOUND OF THE BRAIN.—Dr. Rossi relates in the *Annali Universali di Medicina e Chirurgia* for December 1877, the case of a lad, aged 16 or 17, who, having bought a revolver, was one day amusing himself by shooting at a target with one of his friends. After discharging some shots, he recharged the weapon and drew the trigger, but it would not go off; he therefore looked down the tube, when the revolver exploded suddenly, the ball striking the upper part of the left eyelid, just outside the groove for the passage of the vessels and the supra-orbital and nerve, fracturing the frontal bone, and entering the brain.

At first only the immediate local symptoms were observed, but next morning the right arm was painful and paretic, and there was an appearance of brain-substance at the orifice of the wound. In conjunction with Dr. Rouge, Dr. Rossi made an incision about an inch-and-a-quarter upward, when the pulsations of the cerebral matter, isochronous with those of the heart, were distinctly discerned, and there was found to be a radiated fracture of both tables of the frontal bone immediately above the orbital arch. Through this a probe could be easily introduced to a depth of five centimetres (two inches) in an oblique direction, from below upwards, and from before backwards, without coming into contact with the projectile. Ice was applied, and six leeches behind the left mastoid process.

Contrary to all expectation, the pain and paresis of the right arm soon disappeared; the cicatrization of the wound took place without necrosis, and almost without suppuration; and the patient was well in a few days.

The author, assuming it to be certain that the bullet entered the brain, asks in what part of that organ it could be lodged, there being no nervous disturbance, either paretic or paralytic.

ERICHSEN ON HÆMORRHAGE FROM THE INTERNAL CAROTID ARTERY.—At a meeting of the Medical Society in St. Petersburg (*St. Petersburger Medicin. Wochenschrift*, December 29, 1877), Dr. Erichsen reported a peculiar case of fatal hæmorrhage. A strongly built countryman, aged 18, was admitted into hospital on the second day of an attack of phlegmonous angina. On the second day after his admission an abscess burst into the fauces, and discharged normal pus. It appeared to be going on perfectly well, when on the sixth day there was slight bleeding from the abscess, which was easily arrested by plugging. At the end of twenty-four hours, however, arterial hæmorrhage occurred, and proved fatal in a few minutes. At the necropsy, the abscess cavity, which was as large as a hen's egg, was found filled with fresh blood-clot; the outer side of the abscess was in contact with the internal carotid artery, the wall of which here presented a circular perforation half a centimetre (about one-fifth of an inch) in diameter. At the point of perforation, there was a funnel-shaped dilatation from within outwards. There was no sign of disease in any other part of the vessel. The reason of the perforation was obscure, normal pus would be scarcely capable of destroying so firm a tissue as the wall of the carotid in nine days. Dr. Wolff suggested that there might have been a secondary abscess in the sheath of the vessel, which burst into the abscess-cavity of the tonsil; but no evidence of this was afforded by the necropsy.

ENGLISH ON THE TREATMENT OF VARICOSE VEINS BY SUBCUTANEOUS INJECTION OF ALCOHOL.—At a recent meeting of the Wiener Medizinische Doktoren-Collegium (*Wiener Medizin. Wochenschrift*, January 12), Dr. Englisch described a method which he had employed in the treatment of varicose veins. The principle was to apply as little direct irritation as possible. The vein, with a fold of skin, having been raised by the fingers, the point of a Pravaz's syringe was inserted below the vein, and the contents—1 to 1½ centimetres of a five per cent. solution of alcohol—were injected. The alcohol was diffused in the neighbourhood of the vein, and produced a small swelling: at the same time the vein contracted, probably in consequence of the external irritation. After a time the vein again enlarged, but not to so great an extent as before. The next day there was infiltration in the neighbourhood of the injection, varying in amount in different cases, and in four instances only leading to suppuration near the vein. The abscesses did not exceed the size of beans, and were never attended with rise of temperature, or any other sign of disturbance.

With the hardening and decrease in extent of the infiltration, the veins became smaller and harder, until at last they were converted into a solid cord. In some cases one injection was sufficient, but this was exceptional. In most instances, three, four, six, or even ten injections were required to complete a cure.

A. HENRY, M.D.

LORENTZEN ON A CASE OF ABDOMINAL ABSCESS WITH DISCHARGE OF INTESTINAL WORMS.—Dr. Lorentzen describes the following case in the *Berliner Klinische Wochenschrift* of January 28.

S., a robust woman, thirty years of age, had noticed, three-and-a-half years ago, a gradually increasing abdominal swelling. It was on the whole painless, but at times there were attacks of colicky pains without vomiting, but accompanied with much flatulent distension of the abdomen. These attacks

became more frequent, while at the same time the swelling increased in size. This was found to occupy the umbilical region, extending from 3 centimetres (1½ in.) on the left, to ten centimetres (3½ in.) to the right of the navel, and from three centimetres above to seven centimetres (2½ in.) below the navel; it scarcely projected beyond the abdomen, and was soft and scarcely fluctuating, while the navel projected like a thimble. A few days afterwards, while the patient was at work, a considerable quantity of pus escaped from the now retracted umbilicus through an extremely fine opening. Neither the posterior nor lateral boundaries of the swelling could be reached by a probe, and it was now exceedingly tender. During the following days large quantities of purulent matter, which was at first fecal but gradually became more healthy, were removed through this opening by means of syringing with salicylic acid. One day there was found in the escaping fluid a round very soft and very flabby body, rather more than an inch in length, which appeared to be a piece of a lumbricus, but it was unfortunately lost. The patient's general condition had hitherto been fairly good; but now the abdominal pains gradually returned and high fever set in, raising the temperature to 104.9 F., and the pulse to 120-140; the bowels became irregular, the pus fetid and unhealthy, and the patient much reduced. Under these circumstances, the original opening in the linea alba was enlarged, and a counter-opening made to the right, as low down as possible; a drainage-tube was inserted, and the whole dressed with salicylic acid bandages. Under this treatment, the discharge of pus became much reduced in quantity, and ultimately proceeded from a sinus only, which extended about two inches to the right side. The patient refused to have this sinus laid open, and herself steadily continued the syringing and dressing with salicylic acid for three months. About this time she removed from the sinus in one day two dead lumbrici, each nearly four inches long and more than one-tenth of an inch thick, besides two other smaller ones; and some days after this two more, but somewhat smaller and evidently young worms, came away. By means of anthelmintics, several worms were evacuated *per anum*. Since then, the patient has been well. It is difficult to understand how these worms penetrated the gastro-intestinal wall and escaped outwards; all symptoms of intestinal ulceration were completely absent. We can, therefore, only suppose that the worms alone perforated the intestinal wall, and that, as soon as they had passed through, the openings so caused at once closed spontaneously.

ESENBECK ON A CASE OF BILATERAL RUPTURE OF THE TENDON OF THE EXTENSOR CRURIS QUADRICEPS.—Dr. Esenbeck communicates the following unusual case (*Betz's Memorabilien*, xxii Jahrgang, Heft 12).

H., a baker, aged 50, slipped on the upper stair of his house, and fell to the next floor, with the heel of the right foot under the buttock of the left side. Dragging himself with difficulty to the next stair, he brought his left heel under the seat, and slid violently down to the ground floor. When lifted up, he could stand, but was entirely unable to walk, and could only drag himself along with the assistance of two persons. On examination, there was found inability to extend the lower extremities, pain above each patella, and in the tendons of each rectus femoris muscle a distinct transverse gap, so that the fingers could be passed underneath the patellæ. There was no fracture, and but moderate swelling. The latter was



treated with cold application and Goulard's lotion. By means of a figure-of-8 bandage the patellæ were pushed upwards as far as possible; the knee-joints were placed in pasteboard splints and bandaged with a silicated bandage, and kept in a raised position. After ten weeks the ends of the tendons were united and walking was possible, and recovery gradually became complete, leaving scarcely perceptible stiffness of the knee joints.

W. J. TREUTLER, M.B.

**HUDSON ON SYME'S AMPUTATION AT THE ANKLE-JOINT.**—Dr. Hudson, whose name has long been associated with various mechanical appliances for supplying artificial supports, to relieve deformities, or compensate for losses of limbs, has written an article (*Louisville Med. News*, Nov. 3) on amputation at the ankle-joint. The writer thinks that the results of Syme's operation, as performed by scientific and expert surgeons during the past twenty-five years, have given conclusive evidence of its special advantages to the patient, and demonstrates its superiority over every other amputation of the foot or leg. It is thought to be the "least disabling found with a moderate degree of contraction, usually the least incapacitating, and with scientific prosthetic apparatus, the patient scarcely realises any loss of limb. The end of the stump is painless and an enduring basis of support, reliable for any degree of pressure and service, and equivalent in condition and functions to the heel of the unamputated foot." The writer also adds that the merits of a well-performed Syme's amputation cannot be exaggerated, and alleges that he is able to sustain his position by tabulated records of two hundred cases, of which he has notes. It is thought that no amputation of the leg or foot should be substituted for the Syme, except that of Lisfranc. No improvement on Syme's method can be made by section of cancellated structure of the ends of the tibia, or of the calcaneum. Pirogoff's method is preferable to amputation of the leg, but when any considerable part of the calcaneum has been annexed, the form has been uncouth, and the basis of support poor and painful. Some cases have resulted in a false joint and retraction of the appended part; others in necrosis of the tibia above the annexed portion of the os calcis. The increased length of stump in such cases should not be urged as an advantage to the poor man. If in his case the bucket arrangement alone is available, an elastic wool felt pad, half or five-eighths of an inch thick in the bucket, will be amply sufficient to offset any advantages afforded by the appended calcaneum.

#### PRINCE ON THE MANAGEMENT OF CLEFT PALATE.

—In a paper of which extracts are given in the *Dublin Journal of Medical Science* for January, Dr. David Prince, of Jacksonville, Illinois, objects to the division of the palato-glossus and palato-pharyngeus muscles as practised by Fergusson; but he considers that the muscular fibres traversing the velum palati transversely—the circumflexus or tensor palati—should be divided by a vertical cut on each side.

With reference to the application of sutures, he makes the following suggestions.

The wire which is to pass through the cautery openings, and is to encircle the central part of the plate, is first armed with an oiled pasteboard square, having a small perforation in the centre; and as the wire is drawn through, the other end of the wire is armed in the same way. As the wire is drawn down to be twisted, these paste-board squares are made to

slide into the fissures occasioned by the cautery, so as to keep the wire from cutting into the tissues. By this means a very considerable degree of compressure upon the inner cauterised surfaces may be secured, without the subsequent ulcerating of the silver wire into the tissues. All possible strain upon the suture line is thus avoided. If union fail, it must be from some other cause than the mechanical separation of the surfaces. It is also convenient to place a square under the central part of the wire last mentioned, in order to cover the points of the wires constituting the principal stitches. The tongue is thus protected from contact with their points.

In the preparation of these squares or wafers, thin paste-board is cut into squares, one-third to half an inch in diameter, and perforated in the centre. The wire passes through this perforation, and the squares are slipped down at the time of tightening up the wire, so as to bring the paste-board between the wire and the tissue. In order to prevent the early formation of an infectious compound in the paper by the decomposition of the mucus and saliva, the squares are first soaked in a solution of carbolic acid in castor oil, one in eight. By the time these agents have been dissolved out of the paste-board, the cut surfaces have become proof against the absorption of septic products.

The employment of a spray of ether during this and other operations upon the mouth and fauces is of no little importance. The patient is first etherised in the ordinary way. The gag is then placed between the jaws, and an assistant commences to blow a spray of ether into the patient's mouth. This he does constantly, except when interrupted by such of the procedures as are inconsistent with it. Care is taken not to blow so continuously upon one spot as to freeze it.

The flow of blood from the surfaces is very much diminished, and much time is saved which would otherwise be consumed in applying the etherised napkin to the patient's mouth.

**GUIJO ON CUTANEO - PHARYNGEAL FISTULA CURED BY CAUTERY.**—Dr. Ricardo Guijo reports in *La Andalusia Medica*, August 1877, a case where a fistulous track extended from the front of the neck at the level of the thyroid cartilage, backwards and to the right, until it opened, not into the larynx, but into the pharynx, as was proved by injecting water into the cutaneous orifice. After trying unsuccessfully tincture of iodine and solutions of nitrate of silver as local injections, he passed a probe along the crooked path, and upon this a cannula; afterwards he pushed through this a red-hot copper wire fitting the cannula, and thus cauterised the parts without danger of forcing the red-hot wire into other tissues. The pharyngeal opening soon closed, but a second cauterisation was required to complete the cicatrization along the whole track of the fistula. The cure was permanent.

**LITTLE ON A LARGE URINARY CALCULUS.**—At a recent meeting of the Surgical Section of the New York Academy of Medicine (*New York Medical Record*, February 2) Dr. James L. Little presented a specimen of urinary calculus, accompanied by the following history. A young man two weeks previously came under his observation, who was suffering from symptoms referable to the bladder. The chief symptom was incontinence of urine, from which he had suffered about four years. His urine had dribbled continuously. He had suffered but little

pain. A sound was passed, and just before it entered the bladder a hard substance was struck. It was impossible to get the instrument into the bladder. A finger was passed into the rectum, when a large hard substance was detected distending the neck of the bladder and pressing on the rectum. On pressing on the perinæum a hard mass was felt, which was quite readily pushed back into the bladder. Lithotomy was performed by the median operation, notwithstanding the apparent large size of the calculus. Not very much difficulty was experienced in removing the stone, because of the dilatation already existing in the urethra. When removed, the calculus was found to have an irregular shape, and measured five inches in circumference at the portion which presented in the urethra: three inches in its longest diameter; and it had an elbow-like projection which was nearly one inch in length. Somewhat more than the usual amount of hæmorrhage occurred, the bulb of the urethra being unavoidably cut, and it was necessary to ligate two or three vessels. At the time of the report the patient was doing well, no unfavourable symptoms having appeared.

**RICHARDS ON SECONDARY CAUSES OF DEATH FROM DROWNING.**—The injury done to the lungs in the act of drowning is well illustrated by the following case which occurred to Mr. V. Richards at Goaulundo (*Indian Medical Gazette*, 1877).

A boy two-and-a-half years old was found by his mother floating on the top of a tank. When seen by Mr. Richards, the child was insensible and cold, and respiration was almost stopped. The heart was fluttering; there was no pulse at the wrist, but the femoral artery could be felt beating. The tongue protruded, and felt cold. Some water flowed from the mouth and nostrils when the head was held downwards.

For above an hour Silvester's method of artificial respiration was tried; the breathing became more regular, and the lips, which had been previously livid, were natural in colour. Convulsions then came on, lasting for two hours. The child had been placed in hot water and well wrapped up, and an enema of turpentine was given. The convulsions ceased; the breathing was natural, the body warm, the pulse quick and somewhat thready; the temperature  $101.2^{\circ}$ . In this state he continued for about seventeen hours, when difficulty of breathing again came on, with rattling in the throat, and the child died about eighteen or twenty hours after its removal from the water.

[There is no account of *post mortem* appearances in this case, but it is probable that physical injury had been done to the lungs by the penetration of water into their substance. Recent experiments have shown that secondary apnœa in drowning is traceable to this cause. There could be no hope of recovery where sensibility was not restored.—*Rep.*]

A. S. TAYLOR, M.D.

**PACKARD ON THE TREATMENT OF URETHRAL FISTULA BY THE ELASTIC LIGATURE.**—Dr. Packard of Philadelphia (*Transactions of the Medical Society of the State of Pennsylvania*, 1877) relates the case of a boy aged 14, who had suffered from urinary trouble for seven years. He was not known to have had any injury, but beyond this no satisfactory history could be obtained.

On the boy's admission into the Episcopal Hospital on October 7, 1876, he was found to have some narrowing of the urethra, as well as three fistulæ

communicating with that canal. One fistulous opening was situated at the peno-scrotal angle, and had existed for seven years; the other two—one on each side, about half way between the tuber ischii and the anus—were said to have been first noticed during the autumn of 1875.

On October 10, the patient being under the influence of ether, the perinæum was opened on a small staff, a slight roughness, as of calcareous deposit, having been felt during its introduction. Probes introduced at the fistulous openings were brought out through the perineal wound, and a seton of silk was passed through each.

On October 24, there being no tendency to heal, an oakum seton was placed in the anterior fistula instead of the silk. On November 16 the oakum was removed, and an elastic ligature was inserted, and gradually tightened every two or three days, as the tissues yielded to it. On December 10 the boy had an attack of scarlatina, and local treatment was suspended. On December 21 elastic ligatures were passed between the operation wound and the other two fistulæ, and gradually tightened as before. On January 26, 1877, the fistulous tracts had become so superficial that they were laid open by the knife. They then readily healed. **ARTHUR COOPER.**

**ERICHSEN ON EXTRAVASATION OF BLOOD ON THE DURA MATER.**—A series of cases are commented upon in the *Lancet*, of January 5th, 1878, where clots were found after death, or by the aid of the trephine during life, upon the dura mater. In one case a child falling down stairs was picked up a little dazed, and was found dead in bed the next morning with a clot upon the dura mater on the side struck. In another case a lady, treading on the train of another lady's dress in advance, tripped, struck her head against the wall, and died some hours afterwards, comatose, a large clot being found on the side struck, over the meningeal artery, but without any fracture of the skull. A cabman who was thrown off his box was trephined, and a large clot being removed from under the bone, made a good recovery; but a brewer's drayman, who met with a similar accident, and similarly treated, succumbed, the middle meningeal being found torn, but not divided, and this typical case serves to illustrate Mr. Erichsen's views of the nature and treatment of such cases.

One peculiarity of wounds of the middle meningeal artery is that blood wells up, and is not ejected *per saltum*. This is due to the course of the artery, hæmorrhage from which will cease of itself if it be divided, though the surgeon cannot arrest it otherwise than by plugging. The large size and peculiar shape of the clots was pointed out, and also the fact that, owing to the great vascularity of the dura mater, blood was extravasated under the calvarium, in many cases without any injury of the middle meningeal artery itself, its smaller branches alone suffering. Mr. Erichsen alluded to Sir Charles Bell's well-known experiments, proving that the dura mater is separated from the calvarium by the force of the blow, and that subsequently hæmorrhage fills up the space thus formed; otherwise the extravasated blood could not itself separate the adhesions between the calvarium and dura mater.

Two cases are related where the injury occurred, not to the arteries, but to the veins of the dura mater. Both proved fatal, one after several months, where the diagnosis was not verified *post mortem*. In the other it was found that a portion of bone was



driven inwards, and had lacerated the lateral sinus, which had bled freely when the patient was trephined; plugs of lint were applied to assist the hæmorrhage, and these eventually led to pyæmia; and this case, Mr. Erichsen thought, explained the symptoms that used to puzzle surgeons of old, namely, the occurrence of pyæmia and the tendency to secondary deposits, especially in the liver, after injuries to the head. The liability to abscess forming between the cranium and dura mater was explained by the fact that the periosteum is separated as well as the dura mater, and hence the supply of nutriment is cut off from the calvarium, which becomes, like all necrosed bones, a source of irritation and of abscess.

**ERICHSEN ON INJURIES OF THE SCALP.**—In the *Lancet* of Jan. 26, 1878, Mr. Erichsen, in continuation of his lectures upon injuries of the head, reviews the subject of scalp-injuries, explaining why, on account of the extreme vascularity of the part with its serpentine vessels, anastomosing one with the other freely, and lying amongst dense granular fat that hinders their ready contraction, hæmorrhage is necessarily profuse and often uncontrollable. Hence the care necessary in removing sebaceous and other tumours; and if from any cause hæmorrhage should be difficult to arrest, Mr. Erichsen points out how easily acupuncture will effect the purpose. The reason why traumatic erysipelas of the scalp is more apt to arise than from wounds in other parts of the body, is the looseness of the areolar tissue on which the tendon of the occipito-frontalis lies, where pus often collects, owing to the pouch or bag generally found in scalp-wounds; hence the necessity of drainage, and hence the reason why stitches in scalp-wounds, by closing up the mouth of the pouch and hindering the escape of the matter formed, are followed by erysipelas. Mr. Erichsen repudiates all complicated artistic bandages in scalp-wounds, believing them to be worse than useless.

The diagnosis between abscess and erysipelas of the scalp is clearly described. In erysipelas, the ears are red, swollen, and covered with blebs; in abscess, the occipito-frontalis muscle determines the limits of fluctuation. The wonderful reparative powers of the scalp are noted, and cases mentioned where large portions have been removed without harm.

The phenomena of true and false stunning are well described. Two persons are thrown out of a carriage; one is stunned, forgetting on recovery everything that happened a minute or two before losing consciousness; his companion is picked up also unconscious, but can remember on recovery from faint all the minutæ of the accident. The vastly different after-history of the two cases is clearly defined. The important question, "Is he drunk or dying?" concludes Mr. Erichsen's second lecture, and is answered by the important advice, "Wait and see; do not decide too hastily."

**WATSON ON NERVE-STRETCHING IN ACUTE TRAUMATIC TETANUS.**—Dr. Eben Watson records in the *Lancet*, February 16, 1878, two cases which, though unsuccessful, still show the great value of this mode of treatment in mitigating the progress of the disease. In the first case, that of a youth aged 16, on the third day of the convulsions the median and ulnar nerves were powerfully stretched. On recovering from the chloroform, he had a general spasmodic paroxysm, and afterwards seemed much better, but sank within 48 hours. In the second case, a big powerful drayman, aged 35, lived 13 days after

the operation, and was supposed to be out of danger, when he was carried off by one of those sudden exacerbations of the disease, common in tetanus, especially if the patient be suddenly startled, as happened in this case. Dr. Watson draws attention to the uncertainty of action of Calabar bean, and no one who has tried this drug extensively in neuralgia can have failed to notice the varying effects produced by different preparations. [Dr. Watson draws attention to M. Verneuil's successful case of nerve-stretching in tetanus as the only one he could find recorded. A successful case by Dr. Paul Vogt was recorded in the *Medical Times and Gazette*, Nov. 18, 1876, p. 572. In a valuable *résumé* of a series of cases recorded in the *Lancet* of the same date as Dr. Watson's cases, the editor draws attention to the presumed influence of mental impression in predisposing to, or determining an attack of tetanus, and expresses a belief in the possibility of such a cause existing. Strangely, however, in this article Dr. Watson's are stated to be the first recorded cases of nerve-stretching treatment, whereas Mr. Callender (*Lancet*, vol. i, 1876, p. 596) refers to M. Verneuil's case (*vide Medical Digest*, Sect. 1329, 4).—*Rep.*]

**NUNN ON THE INTRAVESICAL USE OF QUININE IN CHRONIC CYSTITIS.**—Mr. T. W. Nunn has lately been using quinine injected into the bladder in cases of chronic cystitis with offensive urine, and states (*Lancet*, Feb. 23, 1878) that the results are highly satisfactory, the urine becoming healthy, and micturition occurring every six or seven hours, in place of every hour or hour-and-a-half.

**BARWELL ON LIGATURE OF THE SUBCLAVIAN AND CAROTID FOR INNOMINATE ANEURISM.**—Mr. Barwell reports two cases of successful ligature of the carotid and subclavian for innominate aneurism, in the *British Medical Journal*, Feb. 16, 1878. In each case the operation was followed by intense headache, which soon passed away, and at the end of several weeks the patients were able to leave the hospital.

R. NEALE, M.D.

**ZAUFAL ON THE INSPECTION OF THE NASOPHARYNX FROM THE NOSTRILS.**—In the *Archiv für Ohrenheilkunde*, vol. xii, part 4, Zaufal describes his method of examining that part of the nasopharynx which, as a rule, has been obscured from the difficulty of lighting. He uses a series of five specula, from 10 to 11.5 centimetres (4 to 4½ inches) long, with a caliber of from 3 to 7 millimetres (.12 to .28 inch) in diameter. These are passed along the floor of the nasal cavity till the smaller end reaches the nasopharyngeal cavity, and the examination is made by throwing light in by the usual laryngoscopic mirror. The mouths of the Eustachian tubes and the nasopharyngeal walls can be thus seen. He holds it to be a valuable aid to rhinoscopy and the determination of the state of tumours in the cavity by means of the finger.

W. LAIDLAW PURVES.

#### RECENT PAPERS.

- Two Uncommon Cases of Syphilitic Mammary Chancre. By Dr. Alfred Fournier. (*L'Union Médicale*, Feb. 14.)  
On the Positive Chemical Galvano-Cautery in its Applications to Erectile Tumours. By Dr. Stoeber. (*Revue Médicale de l'Est*, Feb. 1.)  
Case of Artificial Anus. By Dr. Ch. de Vascher. (*Annales de la Société de Médecine de Gand*, Jan. 1878.)  
On Sacro-Lumbar Spina Bifida. By M. Duplay. (*Le Progrès Médical*, Feb. 23.)  
Cases of New Growths of the Breast. By Dr. A. Gherini. (*Annali Universali di Medicina e Chirurgia*, February 1878.)

Wound of the Chest, with Prolapse of Lung : Recovery. By Dr. Völkel. (*Berliner Klin. Wochenschrift*, February 18.)  
 Inhalations through the Cannula after Tracheotomy for Croup and Diphtheria. By Dr. J. Pauly. (*Berliner Klinische Wochenschrift*, February 25.)  
 A Clinical Account of some Cases of Intralaryngeal Growths. By Dr. G. M. Lefferts (*New York Medical Record*, February 9.)  
 Resection of the Ribs in Retrocostal Abscess. By Dr. H. Lossen. (*Berliner Klin. Wochenschrift*, March 4.)  
 On the After-treatment in High Operation for Stone. By Dr. Leschik. (*Ibid.*)  
 Clinical Conference on a Case of Tetanus. By Dr. C. Ghinozzi. (*Lo Specimentale*, February 1878.)  
 On the Various Forms of Periostitis, with Special Reference to Acute Purulent or Malignant Periostitis. By Dr. Podraski. (*Allgemeine Wiener Medizin. Zeitung*, Feb. 12 and 19.)

## DISEASES OF CHILDREN.

ERB ON SPASMODIC SPINAL PARALYSIS IN INFANTS. — Professor Erb, of Heidelberg, remarks (*Betz's Memorabilien*, vol. xxii, pt. 12) that spasmodic spinal paralysis in infants is more frequent than is usually supposed, and is often misunderstood. It is frequently regarded as of cerebral origin, or as connected with the cerebral derangements of childhood; an error to be avoided without difficulty by accurate observation. Symptoms of spasmodic spinal paralysis, complicated with previous paralysis of the arm, and distortion of the face, and coexistent with strabismus, unquestionably point to a cerebral origin. More rarely is it confounded with atrophic spinal paralysis (tabes dorsalis proper) which is characterised by its sudden onset, by marked atrophy, by shortcoming and deformity of the limbs, and by the absence of reflex and galvanic irritability. The affection is developed slowly and insidiously, without convulsive or apoplectic symptoms. The legs are moved with difficulty, they are clumsy and stiff, and retained by the tense or contracted muscles in certain fixed positions. Usually the child cannot walk at all, but yet can, when lying down, move the legs though with some difficulty. If the child be supported under the arms, attempts at walking are made, but the thighs are closely pressed together, the knees slightly bent, the feet stretched out, so that only the points of the toes touch the ground, and in progression the feet are continually crossed and stumble one over the other, or, in slighter cases, are dragged along the ground. Standing still is usually possible without difficulty, with some support. The skin is normally sensible, as also the reflex sensibility; the feet are mostly cold. The upper extremities are generally unaffected, likewise the brain and cerebral nerves. The intellect, speech, and movements of the eye are perfectly normal. The general health and nutrition are usually good, and there is an entire absence of atrophy. Dr. Erb describes two typical cases of children under five years of age presenting the above symptoms. In both there was total inability to walk, and the peculiar and characteristic position of the thighs and feet was strongly marked, and there was also some difficulty and indistinctness of speech — while both seemed otherwise in perfect health. Both presented a close resemblance to the locomotor ataxy of adults, and hence the treatment indicated in the first instance was the use of galvanism and cold water applications. But further experience and long continued observations are needed to clear up the course and nature of these cases.

TASSIUS ON A CASE OF IMPERFORATE ANUS. — The following case is reported by Dr. Tassius (*Betz's*

*Memorabilien*, xxii Jahrg., 12 Heft.). An infant, three weeks old, was found to have no anal orifice, and the fæces were passed in a semi-fluid condition, with great straining, through a small opening about the size of a straw, situated on the floor of the vagina immediately behind the fourchette. The abdomen at the same time was tender and distended. A trocar and cannula were passed from this opening to the usual site of the anus, and the skin perforated, and the passage thus made was dilated with catheters of various sizes. A large quantity of fluid fæcal matter and of gas was discharged rapidly by this orifice, with evident relief to the infant. But after seven days, probably through neglect on the part of the attendant, things had returned to their former condition. A second and similar attempt at relief also proved unsuccessful. Hereupon the perinæum was divided throughout its extent from the abnormal orifice in the vagina to the site of the anus; the end of the gut was dissected out, and secured in its proper position. The opening in the gut was found to consist of a cartilaginous ring of the size of a straw, while otherwise the rectum was in a normal condition. The child made a good recovery, and is now six years of age. The evacuations pass by the natural way, and the presumed absence of a proper sphincter ani muscle cause no inconvenience.

W. J. TREUTLER, M.B.

ADAMS ON INFANTILE PARALYSIS. — In the *Obstetrical Journal* of Great Britain and Ireland, Feb. 1878, Mr. William Adams remarks that under the heading, "infantile paralysis", are found two distinct forms of disease. The first class of infantile paralysis comprises that form which is associated with rigid muscles, it appears early after the birth of the child and comes on gradually. Such cases occur in connexion with protracted labour, the children being born asphyxiated and often thought to be dead. The muscles in these cases do not undergo structural changes. As regards the treatment, tenotomy often enables children to stand and walk although complete recovery is hopeless. In the second class, the muscles are flaccid, the paralysis often comes quite suddenly, and if the child happens to have received a blow or to have fallen shortly before, the paralysis is attributed to the accident. In these cases there is a tendency to degeneration of the muscles and to loss of response to faradisation. Mr. Adams draws attention to the fact that this form of the disease is often preceded by febrile disturbance, which frequently escapes notice. The cases of paralysis with flaccid muscles, however, always tend towards spontaneous recovery.

FANCOURT BARNES, M.B.

WORONICHIN ON NIGRINISM. — The above is selected from a large choice of names to indicate a condition the reverse of that which obtains in albinos. The author (*Jahrbuch für Kinderheilkunde*, Band xi, Heft iv), relates several cases of more or less complete nigrinism, of which the following is the most remarkable. A married couple, both slightly dark, had had two ordinary children, when the woman again became pregnant. Nothing unusual occurred while she was in this condition, and after an easy labour she gave birth to a girl, whose blackness struck all present with astonishment. The midwife gently informed the mother that the child would not live; but, as the child cried loudly and sucked well, a medical man was hastily called, who sought in vain for a malformation of the



heart or liver. The child grew well, got her teeth early, soon learnt to walk, and, in her third year, was extremely lively and sensible. The skin was of a brownish black color, almost darker than that of a mulatto. The shape of the head and the expression were quite of the Caucasian type, and had nothing in common with the negro. The hair was black but smooth and hanging—not woolly. Certain parts of the skin were of a lightish colour, namely, around the navel, behind the ears, between the fingers and toes, and about the genitals and the nostrils. The child is now eight years of age, is well grown and healthy, but is everywhere known as Black Mary. Two cases of partial nigrinism are also given; but these might with equal justice be looked upon as large nævi.

RALPH W. LEFTWICH, M.D.

**WALKER ON TRACHEOTOMY IN CROUP: RECOVERY.**—Mr. Benjamin Walker (*Medical Times and Gazette*, vol. 1, 1878, p. 166) records a case of recovery through tracheotomy performed two or three minutes after the child was reputed, by the friends, to be dead. The case is worthy of being placed on record for two reasons; firstly, because the child became asphyxiated in twelve hours and a half from the first symptoms of the disease; secondly, because it shows the value of tracheotomy in apparently lifeless cases, the father having actually forbidden the mutilation of his apparently dead boy.

RICHARD NEALE, M.D.

**POOLEY ON CONGENITAL PHIMOSIS.**—Foremost amongst the unpleasant effects of congenital phimosis, Dr. Pooley (*American Clinical Lectures and New York Medical Record*) places incontinence of urine. Nocturnal enuresis in boys he regards as being almost always due to this cause. An extreme degree of preputial contraction is not necessary to produce this result, for it is frequently complicated by adhesions between the foreskin and glands, and by the presence of hardened smegma behind the corona. The exact connection between the cause and effect is not explained, but reflex action is suggested. The irritation of the secretion and urine retained behind the foreskin is often sufficient to give rise to a balanitis, with such a copious discharge of pus as to simulate clap. This inflammation, Dr. Pooley says, may extend down the urethra to the bladder, and may give rise to a veritable cystitis, presenting all the symptoms of stone in the bladder, and only distinguishable from that affection by sounding. The remedy is circumcision—an operation which, in his experience, is always followed by good results. In operating, he recommends the use of the clamp in removing the tegumentary layer of the prepuce, then turning back the mucous layer and attaching it to the cut edge of the skin by numerous fine black silk sutures. This inner layer may require division on a director, and, if there be any bands of adhesion, they should be broken up. The wound should be dressed with a strip of oiled lint and a cold-water bandage. In urinating, the child should lean well forward, to prevent the dribbling of the urine over the wound.

## MATERIA MEDICA AND THERAPEUTICS.

**KAPPESSER ON THE USE OF SOFT SOAP IN GLANDULAR AFFECTIONS.**—In the *Berliner Klinische Wochenschrift* for Feb. 11th, Dr. Kap-

peesser suggests regular periodic inunction of soft soap in certain chronic glandular affections, and gives four cases in which it was so used with apparent success.

The first case occurred about twenty years ago. It was that of a pedlar who, with his wife and four children, suffered from scabies, for which they were treated with local applications of soft soap. One of the children, a boy nine years of age, was also affected with scrofulous swelling of the glands of the neck, inflammation of the conjunctivæ and eyelids, &c., which had resisted all previous treatment. Owing to the greater severity in him of the cutaneous affection, frictions with soft soap were more frequently and extensively employed. Singularly enough, all signs of glandular and strumous disease disappeared simultaneously with the cure of scabies.

The next case occurred some years later, and was that of a little girl of about three years, in very poor and neglected circumstances. Both corneæ were ulcerated, with an acrid discharge; the glands and cellular tissue of the neck, especially on the right side, were enormously swollen, and there were six or eight fistulous openings, from which flowed an abundant thin purulent discharge. About half an ounce of soft soap, dissolved in a little tepid water, was rubbed twice a week at bedtime into the whole posterior aspect of the body, from the neck to the knees, with a piece of soft flannel, and was washed off again about ten minutes after its application. In addition, she was put upon nutritious diet and cod-liver oil. In about four weeks' time the glandular swellings had almost disappeared, the discharging sinuses were nearly closed, and the inflamed condition of the eyes had subsided; there yet remained a dense opacity of each cornea. Owing to neglect on the part of the child's relatives, this treatment was now interrupted, and its condition rapidly grew worse. But on resuming the regular inunction, etc., matters again quickly improved, and after a few months there remained only two small dim spots on the corneæ, while otherwise the child was to all appearances well, and was still so when again seen two years afterwards.

The third case was in nearly all respects similar to the last one, and under the application of soft soap, with nutritious diet, etc., complete recovery resulted.

The fourth case was somewhat different. It was that of a female infant, sixteen months old, and was first seen in August 1876. It then presented a hard and tender glandular swelling of the size of an egg behind the angle of the left jaw; the mouth, nose, and anus were excoriated, the entire skin was covered with dark spots and a papular eruption, and the scalp was a mass of thick crusts, beneath which was a raw suppurating surface. The gums and buccal mucous membrane were ulcerated. Under the idea that the affection was syphilitic the child was treated with the suboxide of mercury, apparently with benefit. Some months afterwards, it again came under observation, in a sadly worse condition. The cervical swelling was still hard, and had grown considerably; the eyes were inflamed, and one of the corneæ was ulcerated; the left lower jaw showed signs of necrosis in the place where one of the molar teeth had dropped out; all the fingers, and most of the toes were swollen, inflamed, and covered with ugly sores, while pustules and boils were spread over the entire body, especially about the anus and genitals, and the scalp was covered with a thick crust. Soft soap was now regularly rubbed into the back in the manner above described, avoiding the more inflamed

parts, while the sores of the mouth were touched with a solution of potassium chlorate. In a short time the ophthalmia diminished, the sores and cutaneous eruption began to decrease, and the crusts of the scalp to fall off, leaving a clean healthy surface; the glandular swelling in the neck decreased considerably, leaving only a certain amount of induration of the jaw, while the child's nutrition and general health improved rapidly, until only the necrosis of the jaw remained, to be met by appropriate treatment.

Dr. Kappesser considers the above cases to justify the argument of *post hoc ergo propter hoc*. He wishes mainly to direct attention to the treatment employed, with a view to its further trial in similar cases, and also in chronic inflammation and ulcerations, especially of the joints and internal organs.

**DAWOSKY ON THE TREATMENT OF CHRONIC THROAT-CATARRH WITH NITRATE OF SILVER.**—Dr. Dawosky lays down the proposition (*Betz's Memorabilien*, vol. xxii, part 12) that in the treatment of diseases of mucous membranes, where external applications are possible, nitrate of silver is a remedy useful before all others. Brought into contact with a mucous surface, it coagulates the mucus; and if applied in excess, it unites chemically with the tissue of the membrane beneath, forming a more or less thick crust. If the nitrate be applied to an actively secreting mucous membrane, it first irritates the distended blood-vessels and capillaries, and also stimulates their contractility, so that they unload themselves and cause an onward flow of the blood accumulated in them. Hence it becomes necessary to the efficient use of nitrate of silver to form an accurate estimate of the quantity to be applied in each case, and also that it should be applied by the physician himself. In chronic throat-catarrh, we have a congested condition of the mucous membrane, and a consequent abundant secretion, with swelling and redness occurring in unequally distributed patches. If these patches become denuded of epithelium, they appear yet more deeply reddened. In such cases, the nitrate should not be applied otherwise than in a solution of definite strength. It is convenient to have a concentrated solution, which may then be diluted with water or glycerine. After applying it with a brush to the affected parts, these should be painted over with a solution of glycerine, and the application is repeated so long as there is any swelling, unhealthy secretion, &c. At the same time, the food and drink taken should be cold, and smoking discontinued. Should the larynx be also affected, it should be brushed with the caustic solution, of a strength of 1 to 8, repeated three or four times a day. A large number of cases of laryngeal catarrh thus treated, have uniformly yielded the best results.

W. J. TREUTLER, M.B.

**HAGENBACH ON THE USE OF SALICYLATE OF SODA IN THE FEBRILE DISEASES OF CHILDREN.**—In an article in the *Correspondenz-Blatt für Schweizer Aerzte*, No. 15, 1877 (*Allgemeine Medizin. Central-Zeitung*, October 10), Dr. Hagenbach gives the results of the use of salicylate of soda in a large number of cases in the Children's Hospital at Basle. The following quantities have been generally divided into two portions, and given with an interval between them of half-an-hour or an hour; for children under one year, 15 grains; when between one year and two years, from 22 to 30 grains; for those between three and five years, from 37 to 45 grains; when between

six and ten years, from 52 grains to a drachm; when between eleven and fifteen years, from one drachm to 82 grains. The best hour for its administration is five o'clock in the evening. It is seldom given more than once in the twenty-four hours, and when possible it should be taken on an empty stomach. When sweetened with syrup of cinnamon or with liquorice, it is taken much more willingly than quinine; its action, however, is uncertain. Sometimes large doses do not produce the desired results, while in other cases small doses act too powerfully. In diseases attended with continued fever, the first doses appear to produce more decided remissions than the subsequent ones, causing a reduction in temperature from  $1.5^{\circ}$  to  $4^{\circ}$  cent. ( $2.7$  to  $7.2$  Fahr.), as a rule, within three hours after it has been taken. The greatest remission occurs after six hours. With the fall of temperature, there was regularly a diminished frequency of the pulse and of respiration. Unpleasant secondary effects are sometimes produced. Not rarely the medicine is vomited, but if the vomiting do not take place until from one quarter to one half an hour after its administration, there often ensues a complete remission notwithstanding. The second dose, given half an hour later, is often retained. Diarrhœa is sometimes produced by its use; it is, however, very transient, and does not leave behind it any serious disturbances of digestion. When there is restlessness, as shown by an anxious countenance, talkativeness, etc., this passes off with the appearance of the remission, and a quiet sleep follows the breaking out of perspiration. Symptoms of collapse are extremely rare. Marked ringing of the ears or deafness never takes place.

Whereas in the treatment of febrile diseases in children, Dr. Hagenbach previously made frequent use of baths, wrapping in wet sheets, and of ice-bladders, in addition to the energetic employment of quinine, it is not now uncommon for weeks to elapse without a single bath being given for the purpose of reducing the temperature. In the severe forms of scarlet fever or of typhoid fever, baths are still resorted to, but in the lighter forms salicylate of soda is always used instead. It is only now and then that, on account of nausea and repeated vomiting, it is found necessary to abandon its use and to resort to quinine.

**HAMBURGER ON THE EXCRETION OF MERCURY.**—E. W. Hamburger (*Prager Med. Wochenschrift*, Nos. 4 and 5, 1877, and *Centralblatt für die Medicin. Wissenschaften*, July 28) found that the urine contained mercury regularly during the use of inunctions of mercurial ointment, while the milk contained none. When mercury was administered by suppository, the urine and milk both gave evidence of the presence of the drug. He used the electrolytic method of Schneider, after satisfying himself, by experiments, of its usefulness.

A. HENRY, M.D.

**DUJARDIN-BEAUMETZ AND OTHERS ON THE HYPODERMIC INJECTION OF CHLOROFORM.**—M. E. Besnier has performed hypodermic injections of chloroform with advantage, and without any unpleasant consequences. Some of his colleagues have not been so fortunate, and have an unfavourable opinion of this method. M. Dujardin-Beaumetz (*Journal de Thérapeutique*, January 25, 1878) though following M. Besnier's instructions in every particular, has often seen superficial sloughing of the skin follow the injection; and when there was no sloughing he has noticed considerable induration, which disap-



peared very slowly. The benefit obtained is not very great. Doubtless the pain is relieved, but only at the spot where the injection is made. Thus a patient suffering from tic-douloureux in the face is not relieved by an injection of chloroform in the fore-arm. There are no general sedative effects, even when a drachm of the drug is used. Similar observations have been made by M. Moutard-Martin, who has seen the eschar occur at some distance from the point of injection rather than at the site of the puncture itself; by M. Edouard Labbé, who says that the injection of chloroform causes pain; by M. Constantin Paul, who has found that the sedative effects do not appear until sometimes two or three hours after injection. It would, therefore, appear that subcutaneous injection of chloroform may be attended with considerable disadvantages, and that it cannot be substituted for injection of morphia in ordinary practice. The latter remains the best means of assuaging pain. Doubtless it sometimes produces some trifling constitutional disturbance, but, as it was justly remarked by some members of the Société de Thérapeutique, these undesirable effects may be very much restricted by associating the morphia with atropia.

**LINCOLN ON INJURY RESULTING FROM ELECTRICAL TREATMENT.**—Dr. Lincoln (*Boston Medical and Surgical Journal*, October 25) reports some interesting cases in which the application of electricity gave rise to unpleasant consequences. In a case of rheumatic arthritis, the usual galvanic treatment at first relieved the pain, and imparted a sense of vigour to the body. After the first two or three weeks, however, the benefit became less marked, and soon an acute attack, or exacerbation of the disease, set in, which Dr. Lincoln thinks might reasonably be attributed to the treatment. In a case of spinal exhaustion, galvanization induced restlessness and sleeplessness, from which the patient had never suffered previously, and which continued to trouble him as long as he received electrical treatment, without being balanced by any good results whatever. A case of muscular rheumatism was very rapidly improved, but this improvement was followed by severe dyspepsia, and great prostration, cured in a short time by change of air. A lady suffering from locomotor ataxia received direct relief from each application. This relief lasted twenty-four hours, but was followed the next day by an exaggeration of the symptoms; she was worse at the end than at the beginning of the treatment. A case of muscular pain and weakness of the legs was always rendered worse the day after the application of the electricity. Dr. Lincoln then mentions some other undesirable effects, which were, however, transitory in their nature. In conclusion he says: "As far as I am able to judge, the harm that may be done by electricity mostly arises from over-stimulation, that is, exhaustion of the spinal or ganglionic systems."

**AYER ON THE BROWN-SÉQUARD TREATMENT OF EPILEPSY.**—In a paper in the *Boston Medical and Surgical Journal* for December 27, 1877, Dr. James D. Ayer records the results of systematic treatment in twelve cases.

The following prescription (occasionally slightly modified) was used in each case.

R. Sodii bromidi, iodi bromidi, ammonii bromidi, aa ʒ iij.; potassii iodidi, ammonii iodidi, aa ʒ iss.; ammoniæ sesquicarbonatis, ʒ i.; tincturæ calumbæ, f ʒ iss.; aque destillatæ, ad f ʒ viij. M.

The full dose was one and a half drachms before each meal, and three drachms at bedtime. The patients were informed at the outset that regular treatment would continue two years, at the end of which time the dose would be left, in a measure, to their discretion, full treatment, except for averting threatened attacks, being no longer advisable.

Six of the patients took, during more than half the treatment, drachm doses of the following mixture after each meal.

R. Strychniæ sulphatis, gr. i.; acidi sulphurici dilute, ℥x.; aquæ destillatæ, ʒ iv. M.

To others strychnia was given in smaller doses and for a shorter period.

In all cases the diet was carefully regulated; coffee and tea were allowed in moderation; alcohol and tobacco were prohibited as far as possible. Healthy mental occupation and amusements, out-of-door exercise, and regular hours of sleep were insisted on, while everything of an exciting character was forbidden.

The result in four cases was very satisfactory: the disease being reduced to a single attack in forty-six months, thirty-one months, twenty-two months, and sixteen months respectively. In five cases, the number and severity of attacks were both diminished, but the number of attacks was unchanged. In two cases there was no change in number or in severity. In eleven cases there was marked improvement in general health and mental condition. In one case there was a slight improvement.

**DUREAU ON THE TREATMENT OF OBSTINATE SCIATICA BY SUBCUTANEOUS INJECTIONS OF NITRATE OF SILVER.**—Dr. Auguste Dureau has had the opportunity of observing in MM. Damaschino and Gerin-Roze's wards, the generally favourable results obtained in the treatment of obstinate sciatica by the method of Dr. Luton, of Rheims. M. Dureau (*Thèse de Paris*, Feb. 27, 1877) recommends that the end of the cannula of the subcutaneous injection-syringe should be inserted deep enough to go through the dermis. The injection has always been made in the nates at the point where the sciatic nerve emerges. M. Dureau furnishes the following indications as to the preparation and quantity of nitrate of silver employed. Dr. Damaschino always employs a twenty-five per cent. solution in doses of five drops, and it has always yielded good results. Dr. Luton varies the strength and the quantity of his solution, sometimes using from twenty to twenty-four drops of a ten per cent. solution, sometimes the same quantity of a five per cent. solution. The solution employed by Dr. Bertin, of Gray, is a five per cent. one, and the number of drops injected varies from 15 to 20 or 25 drops. Dr. Gerin-Roze uses the fifteen per cent. solution in doses of 15 drops. Out of twelve cases, this physician has had some cures, some cases of improvement, and some which remain *in statu quo*; he has never, however, seen any unpleasant results. M. Dureau comes to the following conclusions. 1. The injections of nitrate of silver are recommended for old and obstinate neuralgia. 2. Irritation from injections into the depth of the tissues is not to be feared, as is generally supposed. 3. The mode of applying the drug allows the affected point to be reached, and gives so much the more certainty to its action. 4. Cure or improvement is very rapid. 5. Finally, this method is less alarming and much more efficacious than the hot iron.

**COLETTI ON THE PHYSIOLOGICAL AND THERAPEUTIC ACTION OF CINCHONIDINE.**—Dr. Ferdinand Coletti recalls to remembrance the reasons which have induced experimenters to seek substitutes for the sulphate of quinine, and also the writings relating to the properties of these substances. He then reports a somewhat considerable number of experiments made on his pupils, on himself, and on animals. Fifteen pupils, his assistant, and the writer himself, took for several days 30 to 60 centigrammes ( $4\frac{1}{2}$  to 9 grains) of sulphate of cinchonidine procured from Messrs. Gehe, of Dresden, and prepared by Messrs. Howard, of London. They made no change in their usual work nor in their way of living. There was no alteration in the temperature or pulse; no head-symptoms; only a little headache in two instances. In three cases, there was increase of salivation, without the bitter taste in the mouth usually caused by quinine. There were no gastric troubles; on the contrary, the appetite was increased. The eupeptic action pointed out by Moutard-Martin, Howard, and Rabuteau, is therefore confirmed by these experiments. Afterwards, repeating Laborde and Dupuis' experiments with reference to the epileptogenous properties of sulphate of quinine, quinidine, and cinchonidine, but employing cinchonidine only, M. Coletti obtained convulsive phenomena when clonic, tonic, and tetaniform spasms alternated, but without having the aspect of epileptiform attacks. This substance, administered hypodermically in doses of from forty to sixty centigrammes, subsequently brought on death in four cases out of six. Sulphate of cinchonidine, employed in twenty-four cases of intermittent and symptomatic fever, always had the effect of preventing the attack of the first, and of moderating the temperature or the frequency of the pulse in the second.

The following is a very interesting fact. One of the bitches under experiment was with pup; it aborted an hour and half after the injection. This fact helps to confirm the opinion of Monteverdi, relative to the ecboic action of quinine.

**PERNOT ON THE TREATMENT OF WHOOPING COUGH BY CARBOLATE OF SODA.**—Dr. Pernot considers carbolate of soda as a specific for whooping cough. He writes in the *Lyon Médical* (1877) that it is an heroic remedy and would be almost a specific if whooping cough could be cured at once. His cases have been numerous and have presented the following general characteristics: 1. A notable diminution of the paroxysms of coughing after from two to ten days' treatment; 2. Less laboured and painful respiration; 3. Shorter duration of the paroxysms of coughing. Finally, the most confirmed attack of whooping cough remains *in statu quo* from the commencement of the treatment, gradually and quickly lessening in intensity. Dr. Pernot states that, in all the cases which came under his observation, he never saw the whooping cough increase after treatment, and it always appeared to him to diminish more or less rapidly, but always in a time relatively short to its usual duration. Dr. Pernot operates in nervous affections of the bronchi in the following manner. He places the carbolate of soda in a small porcelain crucible held above the flame of a spirit-lamp, which keeps it at an unvarying temperature as long as wished; the carbolate of soda becomes volatilised, so that scarcely any of it remains in the crucible, but the atmosphere of the sick room is impregnated with the vapour of carbolic acid mixed with the elements of coal-tar. The little appara-

tus above described is not always at hand, but a fire-brick is generally to be had, either in town or country, and this, heated to a sufficiently high temperature to vaporise the carbolate of soda, is generally employed by M. Pernot. He also speaks very highly of the disinfecting and antiseptic properties of these vapours of carbolate of soda. M. Dujardin-Beaumetz states that, when the carbolate of soda was tried in the children's wards of the Hospital St. Antoine, although the results in whooping cough were not quite so rapid as those obtained by M. Pernot, it acted very thoroughly in the disinfection of the wards.

**PIOCH ON THE TREATMENT OF VARIOLA BY PAINTING WITH IODISED GLYCERINE.**—Dr. Pioch (*Lyon Médical*, May 21, 1877) recommends the following treatment which he has successfully practised in an epidemic of smallpox, which broke out in a monastic institution under his care. During the first three days, if there be delirium, Dr. Pioch administers quinine and musk. When the eruption is well out and delirium ceases, during the three following days the musk and cinchona are discontinued. Slightly sudorific drinks and slops are given. Towards the end of the seventh day, when the fever which had subsided returns under the influence of the maturing of the pustules, Dr. Pioch has the whole surface of the body, commencing with the feet and finishing with the face, painted with a brush dipped in a mixture of three parts of glycerine and one of iodine. At the end of the fourth day of suppuration, the twelfth day of the disorder, when the fever diminishes, the inunction is discontinued and the cure is patiently awaited. Dr. Pioch has had nine bad cases of variola under his care, of which the first, which was not treated with the iodised inunctions, died. The eight other patients, of whom seven had confluent smallpox, went on well to the last stage and were cured in the usual time.

**GUBLER ON HYPODERMIC INJECTIONS OF DIGITALINE.**—Dr. Gubler announced at the meeting of the Paris *Société de Thérapeutique*, on Feb. 13, that after having made numerous attempts to utilise the active principles of digitalis, he had attained his object. He uses a solution of Homolle and Quenne's amorphous digitaline, in a mixture of equal parts of water and alcohol; one gramme of which solution contains two milligrammes of digitaline. He injects half a syringeful, that is to say, one milligramme of digitaline, and notes all the effects of digitalis. These injections do not produce any local accidents.

**MERCIER ON THE TREATMENT OF ZONA BY TOPICAL APPLICATIONS OF PERCHLORIDE OF IRON.**—Dr. Amedée Mercier speaks highly of the good effects of the method first recommended by Dr. Baudon (*Bull. de Thérapeutique*, tome lxi), and which was put into practice at the St. Louis Hospital by Dr. Lailler. It consists in painting the zona twice daily with a mixture of 30 grammes of perchloride of iron of the codex, and 10 grammes of alcohol. M. Mercier (*Thèse de Paris*, March 2, p. 7), has arrived at the conclusions that the treatment of zona by topical applications of perchloride of iron gives unvarying results, and that the alcoholic solution should be used in preference to any other.

**TROLONG DU RUMAIN ON THE TREATMENT OF DIPHTHERIA BY THE BALSAMS.**—Dr. Trolong du Romain has noted, in M. Jules Simon's wards at the



Children's Hospital in Paris, the results obtained in the treatment of diphtheria by balsams. The method of Prideau (of Andouillé) has yielded satisfactory results to M. Jules Simon, who thus formulates the treatment. The following medicine should be taken in the course of twenty-four hours : 1. Copaiba, 15 centigrammes ; cubebs, 30 centigrammes ; subcarbonate of iron, 4 grammes ; calcined magnesia, sufficient to solidify the mass. 2. Todd's quinine draught. 3. Coffee, rum, Bordeaux wine. 4. The little patients should be fed up as much as possible. M. Trolong de Romain, in his *Thèse de Paris*, May 1877, No. 204, gives the following conclusions. 1. Diphtheria does well with cubebs and copaiba when the child is more than four years old ; when it is younger, it is not easy to administer these drugs. 2. It is not asserted that the balsams are a specific for diphtheria, as mercury is a specific for secondary syphilis. 3. Cauterisation is of no use if it be superficial, and if it be strong it may bring on disastrous results, inasmuch as they increase the already great debility of the patient. Tonic treatment should infallibly be employed.

WEYNABER ON EMULSIONS.—Mr. A. F. W. Weynaber, in the *Druggist's Circular* (quoted in the *Richmond Medical Journal*, December 1877) gives some useful information regarding the preparation of emulsions. It is no doubt true that this part of pharmaceutical manipulation is often most sadly neglected by both the prescribing physician and the practical druggist. If the physician do not note the proper quantities, it is not possible for the druggist to do his part well ; but much remains to the skill of the druggist in making perfect emulsions of oil or balsam.

Mr. Weynaber says that two modes of making such emulsions are in use. One method consists in making a thick mucilage, to which are added, in small portions, oil and water, until all is formed into a perfect emulsion, which then can be diluted with water without oil being separated. The other method consists in mixing the oil with the powdered gum in certain fixed proportions, and then adding a certain quantity of water in proportion to the oil and gum used. The following statement will show the proportions (by weight), in which the ingredients should be used : Oil, 1, 2, 3 ; powdered gum arabic, 1, 1, 1 ; water,  $1\frac{1}{2}$ , 2,  $2\frac{1}{2}$ .

If the oil be mixed with the gum in a shallow porcelain mortar, and then the water be added in any of the above-mentioned proportions, the emulsion will be formed. The ingredients should be weighed very accurately. When the emulsion is formed the stirring should be continued for a few minutes, and water be added gradually.

The first method requires more skill and the proper judgment of the pharmacist, while the operation, according to the second mode, can be performed by almost any young man if he only weigh out the ingredients in the proper way ; but if the pharmacist have acquired all necessary experience and skill in making emulsions according to the second mode, he will finally be able to work according to the first mode also ; and when the proper experience has once been acquired, the first mode will be found very convenient in many cases. A good oil-emulsion should not throw out any oil in a day or two if left on a shelf undisturbed ; and if no oil be thrown out it may be considered a perfect emulsion, constituting a combination of oil, water, and gum, and not merely a mixture of the same.

KERIA ON THE PHYSIOLOGICAL ACTION OF CHLORHYDRATE OF PILOCARPINE.—Dr. Demetrius Keria has made a series of experiments on chlorhydrate of pilocarpine in M. Constantin Paul's wards. The experiments have demonstrated to him (*Thèse de Paris*, 31st May 1877, No. 27) the following facts. 1. Used as a subcutaneous injection, chlorhydrate of pilocarpine, in doses of two centigrammes (0.3 grain) and upwards, produces the same physiological effects as jaborandi, of which it is the alkaloid. 2. In much smaller doses, pilocarpine acts also by only inducing diaphoresis, which in certain cases has been replaced by diarrhoea. So soon as doses of from one to two centigrammes are attained, salivation always comes on, but below that dose it is generally absent, and perspiration alone occurs even with doses of  $2\frac{1}{2}$  milligrammes (0.04 grain) of chlorhydrate of pilocarpine. Dr. Keria likewise calls attention, in addition to his own experiments, to those already made on pilocarpine by Sidney Ringer, Curschmann, Weber, Bardenhewer, Rosenkrantz, and Scotti.

ALEXANDROFF ON THE ACTION OF CHLORHYDRATE OF PILOCARPINE IN CERTAIN AFFECTIONS OF THE EYES.—Dr. Alexandroff, of Marseilles, claims for chlorhydrate of pilocarpine an action little short of miraculous in rheumatic iritis and choroiditis ; two or three subcutaneous injections of the alkaloid, according to the author, having restored vision in cases which most English ophthalmologists would regard as almost, if not entirely, hopeless. The author states that the alkaloid in solution applied to the eye acts in the same manner as eserine, but that it does not give rise to pain after its application. Salivation, profuse sweating, epiphora, and flushing of the face, followed immediately after the injection of the drug, and continued for some hours.

B. T. LOWNE.

MICHAEL AND OTHERS ON AMYL-NITRITE IN TINNITUS AURIUM.—Michael (*Archiv für Ohrenheilkunde*) has found more or less improvement in 19 out of 33 cases. In all cases in which benefit was derived there was increase of the tinnitus during the inhalation, and decrease with the disappearance of the flushing of the face from the amyl-nitrite. Weber Liel obtained improvement in two. Urbantschitsch also found improvement in one case. The last-named gentleman saw the inhalation followed by collapse of some minutes' duration, and by hemiplegia of a very short duration. He advises the use of only one drop at first, either pure or mixed with alcohol, and suspends the application after a few inhalations, as the action of the drug increases for several seconds, and may come on very suddenly.

W. LAIDLAW PURVES.

CROCKER ON THYMOL AS A REMEDY IN SKIN-DISEASE.—Dr. Radcliffe Crocker calls attention (*British Medical Journal*, Feb. 16) to this substance, described by M. Bouillon in the *Pharmaceutical Journal* in 1869, where its use, instead of carbolic acid, was advocated. Since that time little notice has been taken of it in England ; but in Germany it has been used in place of carbolic acid, in Lister's antiseptic treatment, than which, though greatly dearer, it is a more powerful destroyer of living organisms. Dr. Crocker has used ointments and lotions of varying degrees of strength in psoriasis and chronic eczema with benefit, and believes that it will form a valuable addition to the list of stimulating remedies for diseases of the skin.

RINGER AND TWEEDY ON THE MYDRIATIC PROPERTIES OF DUBOISIA MYOPOROIDES.—Dr. Ringer and Mr. Tweedy contribute a paper on the properties of this agent, in the *Lancet*, March 2, 1878. In the early part of December 1877, Mr. Tweedy received from Dr. Fortescue, of Sydney, a small quantity of extract of the plant, indigenous and abundant in Eastern Australia, Dr. Joseph Bancroft having first pointed out its mydriatic powers. Duboisia belongs to the natural order *Solanaceæ*; and its physiological action closely resembles that of atropia, as Dr. Ringer proved by experiments which are fully detailed in the paper.

Mr. Tweedy finds the action of duboisia more prompt and energetic than that of atropia; the pupil in all cases becoming affected sooner and recovering later than the accommodation.

The rate and amount of the action of duboisia upon the accommodation was determined by Mr. Tweedy upon his own eye. He found that in twenty-five minutes, for all practical purposes, this was completely paralysed, although the maximum effect was not reached for four hours. Twenty-four hours afterwards there was no appreciable amelioration, either in the pupil or in the accommodation; but within the next twenty-four hours the effect began rapidly to pass off. Four days after the application, the accommodation was restored; and three days later the pupil was active and of its normal size. No effect upon the extra-ocular muscles could be detected. Subsequently, Mr. Tweedy has used the duboisia largely in ophthalmic practice, in cases where atropia is indicated, and has found its action beneficial, and in some cases, he was tempted to believe, superior to that of atropia.

Duboisia appears, according to Dr. Bancroft, to be identical with pituri, a stimulating narcotic chewed by the natives of Central Australia.

OPIUM-POISONING SUCCESSFULLY TREATED BY ATROPINE.—Dr. Fothergill injected one grain of sulphate of atropine into the arm of a patient whose respiration was failing, after a dose equal to twelve to seventeen grains of opium (*British Medical Journal*, Feb. 23, 1878). At first the respiration continued to fail, until at last it became imperceptible, but after a warm water bath, and hot water bottle to the feet, in ten minutes the respiration was slowly restored; the pupils dilated, and eventually recovery was complete, with no symptom of belladonna-poisoning after so large a dose.

[This case will surely be a complete answer to those who object, on scientific and experimental grounds, to the well-known antagonism of opium and belladonna; and when we find ranged amongst those who condemn such treatment Drs. Brown-Séquard, Anstie, John Harley, and Burness, we feel bound to receive their objections with respect. Dr. Harley's experiments convinced him that the one drug intensified the action of the other (*Medical Times and Gazette*, vol. i, 1868). Dr. Barnes believes the treatment the worst possible (*Medical Times and Gazette*, vol. 2, 1872). Johnson, Wood, Mitchell, Von Gräfe, Cazin, and others, have published cases and papers proving the positively curative powers that opium has in belladonna poisoning, and *vice versâ*. See *Medical Digest*, section 376, 5.—*Rep.*]

RICHARD NEALE, M.D.

SQUIRE ON GLYCEROLE OF THE SUBACETATE OF LEAD.—This preparation, which Mr. Balmanno Squire (*On the Treatment of Chronic*

*Eczeema by a Glycerole of the Subacetate of Lead*) recommends for the treatment of chronic eczema in preference to the benzoated zinc or diachylon ointments is thus prepared:—Take of acetate of lead, 5; litharge, 3½; glycerine, 20; heat for half an hour in a boiling glycerine bath, constantly stirring, and filter in a gas oven, or other kind of heated compartment. It is on sale. Mr. Peter Squire recommends as an ointment, glycerole of the subacetate of lead, 6; vaseline, 28; mix.

G. THIN, M.D.

## RECENT PAPERS.

On Quinetum and its Therapeutical Value. By Dr. H. J. Venkhuyzen. (*The Practitioner*, Feb. 1878.)  
On the Action and Use of Hyoscyamine. By Mr. C. Gill. (*Ibid.*)

## OBSTETRICS AND GYNÆCOLOGY.

EMMET AND BAKER ON REMOVAL OF FIBROUS TUMOURS OF THE UTERUS BY TRACTION.—In a report on recent progress in gynæcology, by Dr. W. H. Baker, published in the *Boston Medical and Surgical Journal* of January 10, the following account is given of the manner in which Dr. T. Addis Emmet removes fibrous uterine tumours. He has on several occasions reported cases of the operation at meetings of medical societies and in medical journals.

The patient having been prepared for the operation by incisions of the cervix, the administration of ergot, or other means, which should allow or force the tumour to present at the os externum, if possible—the hæmorrhage being controlled during the time by styptic injections or the tampon—he proceeds to draw down the lowest portion of the tumour with the double tenaculum or vulsellum forceps. Then, if possible, other forceps are applied higher up, more traction is made, and the portion cut off with a pair of blunt-pointed scissors curved on the flat side. Traction is again made on the remaining part of the tumour, and another portion cut away, which is repeated until the whole mass is removed.

The advantages of this method of operating are said to be these: 1. There is less danger from hæmorrhage; for, as traction is made, uterine contraction is excited, which is kept up by the constant traction, so that the tumour may be removed, piece by piece, with almost no flow of blood. 2. There is less danger subsequently from septicæmia; for, as the uterus keeps up a firm contraction, it assists materially in the enucleation of the tumour, forcing it to become more and more polypoidal in character, until at last there is left to divide but the small pedicle of the tumour, consisting of its capsule. There being but this very small denuded surface, the danger from septicæmia is reduced to a minimum.

Dr. Emmet has thus repeatedly been able successfully to remove tumours varying in size from three to eight and a half pounds; and the great advantages of this method of operating have been twice experienced by Dr. Baker. The only objection which it seems possible to raise against this operation is the increased danger of producing inversion of the uterus; and Dr. Baker thinks that, when compared with the greater advantages which it possesses, even this must be small. Granted that such an accident may occur, the readiness with which it may be re-



duced, if treated immediately, will help us to yield this point and give the above method a just trial.

**DELORE AND OTHERS ON INJECTION OF ERGOTIN INTO THE UTERUS.**—In a discussion in the Surgical Society of Paris (*La France Médicale*) M. Delore said that subcutaneous injections of ergotin were first employed by Hildebrandt in 1872, in cases of uterine fibroma. M. Delore had made injections into the tissues of the uterus itself. He employed one part of ergotin to two of distilled water; he used a speculum, and pierced directly the cervix uteri. In a physiological point of view, the injection of ergotin in the tissues of the uterus produced more intense effects than absorption by the stomach. In his patients he had observed phenomena of different kinds; chills, trembling, bilious vomiting, fainting, troubles of vision, diarrhoea, pain in the kidneys, thighs, legs, abdomen, or head. In two cases he had seen abscesses produced. The patients had been relieved; the hæmorrhages had been arrested; in fine, the results had been encouraging.

M. Duplay had employed the method several times, and, while he had not obtained curative effects, he had obtained satisfactory results as to the relief given. He had never seen any accidents.

M. Terrier had made a number of injections into the skin of the abdomen, and had had no accidents. Frequently he had permitted the injections to be made by the husbands of the patients; in these cases the injections had been made not into the subcutaneous cellular tissue, but in the skin itself, and then he had seen small foci of sloughing. These injections had given very good results in hæmorrhages, but in one case there was violent contraction of the uterus, and the metrorrhagia was augmented.

M. Panas used the ergotin of M. Bonjean. Ergot contained an extractive matter and a volatile oil; this oil was the active principle.

M. M. Sée had very satisfactory results with hypodermic injections of the ergotin of Bonjean.

M. Duplay said that M. Vidal, at the Hospital Saint-Louis, treated prolapse of the uterus in this manner, and obtained results which could hardly be explained, except by action upon the muscular fibres.

M. Delore said that ergotin preparations by different pharmacutists were very different. For these injections ergot could not be employed and continued every day like ergotin.

**LAHS ON CÆSAREAN SECTION IN PREGNANCY, WITH LEFT OVARIAN TUMOUR.**—In the *Deutsche Medizinische Wochenschrift*, February 2, 1878, Dr. Lahs, of Marburg, relates the following case. F. S., a country woman, aged thirty-three, mother of two children, of which the youngest was three years old, remarked, for the first time a year and a half before, a tumour in her left pelvic region. Twelve months later the catamenia ceased, and she became pregnant. Towards the end of the seventh month of pregnancy the bladder and rectum performed their functions with much difficulty. On examination, July 12, after she had presumably been in labour eight days, Dr. Lahs found the abdomen enormously distended. Percussion-sounds were dull everywhere, except in the immediate vicinity of the ribs. Fluctuation could be detected all over the abdomen. Examination *per vaginam* revealed the presence of a firm immovable tumour filling the entire pelvic cavity. Dr. Lahs diagnosed a left ovarian tumour adherent to the pelvic walls, filling the pelvic cavity,

and rising in part above the pelvic brim. A prolonged attempt was made under chloroform to push the tumour out of the pelvis. It was ineffectual.

Dr. Lahs proceeded to perform the Cæsarean section. After the delivery of the child, the placenta was easily removed. The uterus did not contract, possibly on account of the lengthened chloroform narcosis the patient had undergone. Dr. Lahs, therefore, maintained pressure for some time upon the placental site, which had been divided in the incision into the uterus. The uterus was sewn up with three strong silk sutures. On the tightening of the sutures the uterus contracted, and enabled the ovarian tumour to be seen, firmly adherent to the pelvis and abdominal contents. The abdominal cavity was cleaned out with carbolic solution, and the abdominal wound was closed. The patient recovered from the chloroform narcosis, and sank, collapsed, twenty-four hours later. There was no necropsy.

**WEBER ON PUERPERAL AMAUROSIS.**—In the *Berliner Klinische Wochenschrift* for February 4, Dr. F. Weber relates the following case. Frau S., aged 20, weakly, anæmic, and of slight stature, married one year, was attacked in the seventh month of her pregnancy with polyarthritis. At each fresh inflammation of a joint there was a considerable rise in temperature. This reduced the patient's strength considerably. The urine became cloudy, ammoniacal, and albuminous. At the end of the eighth month, on the morning of the 21st October, labour pains suddenly set in, and were of a spasmodic nature. About twelve hours after the beginning of labour, without any prodromata, the patient suddenly called out, "I can't see; I am blinded". She was perfectly conscious at the time. She complained of headache and sparks before her eyes. The spasmodic pains continued; the os uteri remained rigid and dilated only to the size of a half-crown. At eleven o'clock in the evening she had a fit of convulsions, whereupon a hypodermic injection of morphia was given, and chloroform-narcosis obtained. After nineteen more attacks of convulsions, during which six ounces of chloroform were used, the rigid os was incised, and an asphyxiated child was delivered by the forceps. The placenta was expressed, and the uterus contracted well. For the next twenty-four hours she was unconscious and had twelve convulsive attacks, which gradually decreased in duration and intensity. A profuse foul-smelling perspiration set in. The urine contained two-thirds albumen. During the next twenty-four hours there were five more eclamptic fits; urine albuminous; she was furiously delirious, with intervals of consciousness. Chloralhydrate was given in large doses. After this, there were no more convulsions. The delirium was moderated by chloralhydrate. She began to regain her sight on the 26th October. The delirium continued more or less until November 8th. The inflammation of the joints persisted, and materially retarded convalescence. By November 10th the albumen, polyarthritis, and amaurosis had entirely disappeared. Dr. Weber remarks that the case is noteworthy on account of the amaurosis, polyarthritis, eclampsia, and inflammation of the kidneys, terminating in recovery.

**DUNCAN ON TWO FORMS OF WEAK LABOUR.**—In the *Obstetrical Journal of Great Britain and Ireland*, February 1878, Dr. Matthews Duncan distinguishes two forms of weak labour. The first form occurs in multiparæ as a result of a weak

flaccid uterus. The pains are weak, inefficient, and at the same time do not distress the patient. The head reaches the perinæum, but the driving power of the uterus cannot expel it. The second class of weak labour is met with in primiparæ. This is the rarer form. The uterus is active, but morbidly so. Premature retraction of the uterus occurs; the well-defined margin thereof may be plainly felt above the pubes. Here the pains are spasmodic, and compel expressions of distress from the mother. In both cases, the delivery is easily effected by the forceps. Oxytocics are indicated to rouse the flagging uterus in the first class. Chloroform and sedatives soothe the undue and fruitless contractions in the second class.

PROCHOWNICK ON THE LIQUOR AMNII AND ITS ORIGIN.—In the *Archiv für Gynækologie*, Band xi, Heft 2, Dr. L. Prochownick says that the human amniotic fluid contains urea from the sixth week to the end of pregnancy; that it is derived from the skin and kidneys of the fœtus; further, that the quantity of urea increases during the entire pregnancy. A five weeks' ovum contains no trace whatever of urea. Chlorides appear at the end of the third month, and come not only from the kidneys but through the skin of the fœtus. The author concludes that the fœtus is the producer of the amniotic fluid, whose secretion begins in the earliest period of pregnancy. At the end of pregnancy only a trace of albumen can be found. In cases of hydramnion, it is remarkable that the albumen is increased. The extractive matter increases *pari passu* with the absolute amount of fluid. The fats are only found in small quantities, and come from the vernix caseosa. Cholesterin is found by chemical means, but does not appear under the microscope. FANCOURT BARNES, M.B.

LUMBY ON SUPERFETATION.—Mr. Lumby, in the *British Medical Journal*, February 16, 1878, reports an interesting case of this somewhat rare condition, for only six or seven cases are reported in the chief medical journals during the last thirty years, *vide Medical Digest*, section 1579, 1. In Mr. Lumby's case a full-grown child was born January 18th, 1878, and on February 4, seventeen days subsequently, twins full-grown and healthy, made their appearance, much to their mother's surprise.

RICHARD NEALE, M.D.

#### RECENT PAPERS.

- On Obstetric Anæsthesia. By Dr. Pajot. (*Bulletin Général de Thérapeutique*, Feb. 15.)  
 Considerations relating to the Feeding-Bottle. By Dr. Duchesne. (*La France Médicale*, Feb. 13.)  
 Five Months' Pregnancy: Rupture of the Membranes: Mucous Polypus of the Neck of the Uterus. By M. Depaul. (*Gazette des Hôpitaux*, Feb. 12.)  
 Some Data on the Development and the Maturing of the Graafian Vesicles during Pregnancy. By D. Slavjanski. (*Annales de Gynécologie*, Feb. 1878.)  
 On the Auscultation of the Ovary in Cases of Ovarian Cysts, with confirmatory Cases. By Dr. Double. (*Ibid.*)  
 Cesarean Section, with Extirpation of the Uterus; with Remarks. By Dr. P. Müller. (*Centralblatt für Gynækologie*, March 2.)  
 Case of Ovarian Cyst: Ovariectomy: Death from Intestinal Paralysis. By Dr. G. Marcacci. (*Lo Sperimentale*, Feb. 1878.)

### OPHTHALMOLOGY AND OTOLOGY.

STILLING AND OTHERS ON THE CAUSES OF GLAUCOMA.—At the Ophthalmological Congress at Heidelberg in 1877, the subject of glaucoma was discussed at considerable length.

Dr. Stilling maintained that there are two forms of the disease; *glaucoma anticum*, in which the canal of Fontana is narrowed or obliterated; and *glaucoma posticum*, in which there is obliteration of the lymph-space surrounding the optic nerve. He stated that, from five to ten days after the optic nerve of a rabbit had been tied, there was intense glaucomatous hardness of the eye-ball.

Dr. Schmidt-Rimpler expressed the belief that disturbance of the circulation in the veins is a cause of glaucomatous hardening. He also stated that, in four cases in which he injected oil into the anterior chamber of a rabbit's eye, and in which no inflammation supervened, there was no change to be observed in an examination with the ophthalmoscope; that there was a rise of intraocular pressure from the injection of various substances into the anterior chamber; but that he considered that there is a wide difference between mere increased intra-ocular pressure from this cause and glaucoma simplex.

Dr. Ad. Weber answered that a very accurate knowledge of the ophthalmoscopic appearances in the rabbit's eye is needed, to decide from the use of the ophthalmoscope whether there were cupping of the disc or not.

Dr. Hermann Pagenstecher recorded a case of glaucoma in which there was no alteration in the condition of the canal of Fontana, and a second case in which there was complete obliteration of the canal without glaucoma. B. T. LOWNE.

SWANZY ON THE INFLUENCE OF THE UTERUS IN EYE-DISEASES.—Mr. H. R. Swanzy, at a meeting of the Obstetrical Society of Dublin, read a paper with the above title, an abstract of which is given in the *British Medical Journal*, February 23, 1878. Popularly known as "womb-blight", the relationship of uterine affections and eye-diseases among "old women" is not unknown. Mr. Swanzy believes that the reason why the profession knows but little upon the subject, is chiefly the fact that few ophthalmologists are experienced gynæcologists, and *vice versâ*. The first disease Mr. Swanzy connects with the uterus is iritis, in young girls from eleven to seventeen years of age. Dr. Freund, of Breslau, had stated he had found in many ophthalmic cases *post mortem* uterine lesions. In the discussion which followed, Dr. Macan drew attention to the loss of sight occasionally attendant on pregnancy.

[Dr. R. H. Taylor, in the *British Medical Journal*, September 10, 1859, described eleven cases of a peculiar form of scleritis, eight of which occurred in females, and for which no apparent causes could be assigned, except reflex irritation, and apparently of uterine origin. Mr. W. Cooper (*Lancet*, June 14, 1862) states that he has repeatedly traced an irritable state of the eyes, causing much distress, and bidding defiance to all general treatment, to a diseased condition of the womb, and that the ocular troubles have ceased when treatment has been specially directed to the uterine disorder. A case fell under the reporter's own notice some time ago, where an obstinate and untractable scleritis was rapidly ameliorated by Dr. Playfair's intra-uterine application of carbolic acid.—*Ref.*]

RICHARD NEALE, M.D.

HATTENHOFF ON THE CAUSES OF MYOPIA.—At the International Medical Congress in 1877, M. Hattenhoff reported as follows on the etiology of myopia. 1. The ordinary causes of myopia are heredity and ocular work, combined or singly. 2. Hyper-



metropia can be changed into myopia by ocular work. 3. The progress of civilisation, and especially of education, tends to increase the amount of myopia. 4. The predisposition to acquired myopia is often hereditary. 5. In ocular work three factors are principally concerned in producing myopia—accommodation, convergence of visual axes, and oculo-cephalic congestion. 6. The conditions of age, circumstances, duration of work, nature of objects viewed, and state of visual apparatus, powerfully influence the development of myopia. 7. The prophylaxis of myopia includes individual hygienic measures at school and at home, which are in great part realisable by the united efforts of physicians and authorities. Among these measures may be reckoned the use of convex glasses for hypermetropes.

#### RECENT PAPERS.

Direct Fracture of the Orbit: Considerable Chemosis limited to the Lower Eyelid: Cure. By M. Gayet. (*Lyon Médical*, Feb. 3.)  
On the Means of Retaining the Patency of an Artificial Opening in the Membrana Tympani, and on the Ring-shaped Cannula. By R. Voltolini. (*Monatsschrift für Ohrenheilkunde*, Jan. 1878.)  
The Use of Cold in Acute Affections of the Ear. By Dr. Weber-Liel. (*Ibid.*)  
The Action of Medicated Preparations of Gelatin in External Otitis. By Dr. J. Gruber. (*Ibid.*)

### DERMATOLOGY.

HUTCHINSON ON SUMMER PRURIGO (PRURIGO ÆSTIVALIS, 'seu ADOLESCENTINUM, seu ACNE PRURIGO).—Mr. Jonathan Hutchinson contributes to the *Medical Times and Gazette*, of Feb. 16, a paper upon summer prurigo, wherein several cases are brought forward of an hitherto undescribed form of prurigo, differing in many points from Hebra's prurigo, and most of all in the fact that, obstinate as many of the cases were, still some were cured, whereas Hebra stated that the form of prurigo he described was absolutely incurable. Mr. Hutchinson gives minute details of a large number of cases in which the symptoms were aggravated by heat and often quite well in winter, yet by no means were the symptoms confined to hot weather. In their broad features the cases contrasted strongly with the disease known as winter prurigo, and hence the name selected. RICHARD NEALE, M.D.

STROGANOFF ON THE PATHOLOGICAL HISTOLOGY OF LUPUS ERYTHEMATOSUS. — Dr. Stroganoff examined portions of skin excised from a patient who exhibited a well marked form of this disease, and found (*Centralblatt für die Medicinischen Wissenschaften*, No. 48, 1877) that the pathological changes do not merely consist in an inflammatory condition of the connective tissue of the skin, but that there is a special affection of the epidermis, sebaceous glands, and hair-follicles.

HEBRA ON THE TREATMENT OF ACNE ROSACEA. — Professor Hebra relates (*Wiener Med. Wochenschrift*, No. 1, 1878) several cases in which the deformities attending acne rosacea were removed by destroying superficial blood-vessels by incisions, and removing epidemic growths by Volkmann's *curette*. To destroy the vessels, he uses a lancet-shaped needle with a blade two millimetres long, guarded by being placed on a broad base. The operator can thus safely plunge the lancet repeatedly and with great

rapidity into the vascular tissue. The surface generally suppurates, and a second operation is not undertaken until the result of the first is apparent. In a case of a man whose nose had acquired great size—rhinophyma, or the third stage of acne rosacea—a combination of these measures, with the employment of the elastic ligature for the removal of the proboscis-like point, and the subsequent judicious use of incisions and pressure, restored the organ to its normal size and appearance. In another similar case, Hebra states that, instead of using the elastic ligature, he will remove the hypertrophied point of the nose with the knife.

WILHELM ON ERYTHEMA NODOSUM.—A weak anæmic girl, aged 18, suffered from quotidian ague which yielded to quinine, in September 1876. (*Berliner Klin. Wochenschrift*, January 28th, 1878.) In December 1876, she again suffered from nightly attacks of fever, this time accompanied by swellings on the legs and forearm, which had the characteristic appearances of erythema nodosum. The second attack of fever did not yield to quinine, but the patient recovered whilst taking iodide of potassium and small doses of morphia. G. THIN, M.D.

#### RECENT PAPERS.

Alopecia Areata. By Dr. James Cumming. (*The Practitioner*, Feb. 1878.)

### TOXICOLOGY.

LEOPOLD ON POISONING BY INHALING DUST CONTAINING CHROME YELLOW.—Leopold (*Vierteiljahresschrift für Gerichtliche Medicin*, Band xxiv) reports five cases of this form of poisoning, one of which proved fatal. The patients were employed in weaving cloth coloured with chrome yellow (chromate of lead) which was quite loosely applied to the thread, so that a portion of the pigment was easily detached and became diffused throughout the air of the room. The patients were affected with a yellow-coated tongue, yellow sputa, loss of appetite, *malaise*, in some cases vomiting, pain in the region of the stomach and umbilicus, obstinate constipation, and debility. The fæces were yellow. These symptoms disappeared in a few weeks after the removal of the cause, except in the case of an infant nine weeks old, who died six or eight days after the beginning of the symptoms, which, however, did not appear until about three weeks after exposure to the infected atmosphere. The symptoms in this case were fever, restlessness, several yellow-fluid stools daily, redness of the skin over the chest and abdomen, parched lips, and, just before death, short respiration.

After death there was found inflammation and perforation of the stomach, the same appearances which were seen in two cases previously reported by Dr. von Linstow, caused by ingesting chrome yellow. None of the poison could be detected in any of the organs except the lungs.

MATTISON ON DIALYSED IRON AS AN ANTIDOTE FOR ARSENIC.—Mr. R. V. Mattison (*American Journal of Pharmacy*, January 1878) has performed some experiments to test the value of a solution of dialysed iron as an antidote for arsenic. He found that a pure solution of the iron compound had

no effect upon a pure solution of arsenic, nor upon one containing hydrochloric acid; but, if added to the mixture of a solution of arsenic and an artificial gastric juice, the arsenic was rendered insoluble. This action of the gastric juice is due to the neutral salts which it contains; hence, whenever dialysed iron is administered as an antidote for arsenic, it should be mixed with common salt. This acts by precipitating from the solution of dialysed iron ferric hydrate (sesquihydrate of iron), which has long been used for this purpose.

In dialysed iron, therefore, we have a compound from which may be immediately obtained ferric hydrate in a form suitable for administration at once. Of course, the arsenical compound, insoluble or but slowly soluble in the fluids of the stomach and intestine, should be removed as soon as possible from the stomach by an emetic or the stomach-pump, and from the intestine by a cathartic.

#### RECENT PAPERS.

Chronic Poisoning by Chloroform. By M. Aimé Bohn. (*Revue Médicale de l'Est*, Feb. 1.)

### REPORTS OF FOREIGN SOCIETIES.

#### ACADEMY OF MEDICINE IN PARIS.

January 22. *Disarticulation at the Hip-joint.*—The discussion on the disarticulation of the hip-joint, raised by M. Verneuil, brought up all the most eminent surgeons. After MM. Perrin and Rochard (see LONDON MEDICAL RECORD for January) M. Richet recounted the results of his practice. The two points in dispute were these:—1. Which is the best plan of preventing hæmorrhage during operation? 2. What is the best method of dressing in order to prevent consecutive accidents, and especially septicæmia? With regard to the former, M. Richet held to the classic method by two flaps, one anterior, the other posterior, and proposed, as a means of hæmostasis, the compression of the open vessels, by the help of large sponges, either steeped or not in hæmostatic liquids. Compression of the femoral artery sufficed for the anterior flap, care being taken immediately afterwards to tie the artery as well as its great divisions; and all the bleeding surfaces should be compressed with a large flattened sponge, prepared and arranged so as to fit well. When the disarticulation was accomplished, an assistant placed two large sponges well squeezed out, one to the right and the other to the left, at the bottom of the wound, so as to directly and effectively compress the branches of the circumflex, gluteal, and sciatic arteries, which must naturally be implicated by the surgeon in cutting the posterior flap. This plan had twice succeeded in M. Richet's hands. He preferred it to M. Verneuil's, which, though very rational, was too long and difficult, and would remain limited to special cases. As to the dressing, M. Richet passed in review—1. Union by first intention or by occlusion, which he called closed dressing (*pansement fermé*); 2. Open dressing; 3. Intermediate and mixed dressing, which participated of the two preceding plans. M. Richet adopted the latter in a general way, although he had recourse to the others in some cases. He adopted it especially in disartic-

ulation of the hip. In this, the wound resulting from the operation was too large and too ragged to allow exact closure by occlusion. The acetabulum also formed a kind of deep receptacle, in which the liquids would accumulate and acquire injurious properties. M. Richet considered that the open dressing required too long a time to obtain complete cicatrisation, and consequently kept the patient during all this time exposed to all the accidents incidental to wounds, etc. By his plan, the internal and external thirds of the flaps having been accurately united, both deeply and superficially, by sutures and compression, he kept the middle third, that corresponding to the acetabulum, open for the passage of ligatures and of the double elastic tube. In this way the extent of surface was diminished, and the free egress of the discharges, and the introduction of antiseptic liquids, were assured.

January 29. *Treatment of Asthma by Iodide of Potassium and Iodide of Ethyl.*—M. Sée read a paper bearing this title. So far back as 1860, an American physician, Dr. Horace Green, had pointed out the presence of iodide of potassium in a secret remedy for asthma. In 1868, Trousseau made known the successful results which the iodide had yielded in the treatment of the paroxysms of asthma. M. Sée began his researches on the subject in 1869. Twenty-four cases of cure which he has followed up, some during one year, others during two, three, and four years, thus fulfilling the conditions of careful observation, bore testimony to the efficacy of this treatment. Four of them occurred in children, six to adolescents, ten in adults, and four in old people. Similar facts had been observed at La Charité and Hôtel-Dieu Hospitals. The commencing daily dose was 1.5 gramme (22 grains), which was gradually increased to from two to three grammes (30 to 45 grains). The duration of the treatment was, so to speak, indefinite; but generally at the end of two or three weeks, when the paroxysms were ameliorated or got under control, not more than one-and-a-half grammes (22 grains) a day was prescribed. From time to time the treatment might be omitted for a day, but a longer suspension would allow of the return of accidents. The effects of the iodide on asthma and its paroxysms were stated to be these. Respiration became free at the end of from one to two hours; if it had been practicable to administer the drug some hours before the fit, it was almost certainly arrested in its development; the second fit was infallibly stopped; the symptoms improved, and at the end of a short time the orthopnoea and emphysema gave way to normal respiration, with or without disseminated mucous râles. The effects of the iodide on chronic asthma with permanent emphysema were no less remarkable. Inhalation of iodide of ethyl, from six to ten drops, six or eight times a day, had yielded equally satisfactory results. The paroxysms are cut short very quickly.

*Disarticulation at the Hip-joint.*—M. Trélat confined himself to the question of dressing, and defended primary union in amputations and disarticulations. Union by first intention should be the object, the means, the necessary agent in recovery after operations. If this end were not attained it was not the fault of the doctrine, but that of the imperfect methods which the best surgeons had employed even up to the present time. Immediate union consisted essentially in the rapid organisation, by means of vascular formations, of a plastic liquid, very rich in cellular elements. But that this process might go on it was necessary that the cellular secretion should



neither be scanty nor too plentiful, and, above all, that those figurate elements which speedily lost their inorganic faculty, should neither be mechanically interfered with, nor in any way vitiated in their composition. Contemporary surgery had profoundly modified or transformed former practices, so as to fulfil these precise indications, furnished by pathological physiology. To organise the egress of the liquids of the wound, to obtain the exact disposition of the flaps, to use the greatest care that no foreign body, either internal or external, should be interposed between them, these were the conditions indispensable to success; and successful innovations, such as drainage, torsion of the great arteries, forcipressure of the small ones, catgut ligatures, etc., now gave the power of realising them. Like M. Rochard, M. Trélat protested against the slowness of cicatrisation in M. Verneuil's method, and against the difficulty of afterwards applying prothetic apparatus. Besides, if this method should obtain, what would become of a whole series of recent operations, such as disarticulation by Chopart's method, Griffith's and Teale's operations, etc.?

February 5. *Disarticulation at the Hip-joint.*—M. Legouest referred to three disarticulations, which he performed under extremely unfavourable circumstances. If in ordinary cases the long duration of an operation was extremely disadvantageous to the patient, it was in the practice of army surgery that rapidity—a rapidity not excluding prudence—was more specially exacted. Therefore, without refusing to admit the principle laid down by M. Verneuil, which was often called for by circumstances, he protested against its exaggeration. Notably, in disarticulation of the hip-joint, the plan he proposed could not be resorted to, a skilful surgeon being able to avert loss of blood by the old method. M. Legouest was not a partisan of immediate reunion in this operation. With reference to it, he referred to the practice of the Russians in the Crimea, who dressed, nay even stuffed up, amputation-wounds with bad charpie, and were not less fortunate in their results than the French surgeons, who tried to bring about immediate union by the methods in use at that time.—M. Gosselin spoke of dressing in general, and explained the changes in his practice in this respect. He commenced by what he termed the period of indifference or fatalism, when he contented himself by following the teachings of his masters. In a second period, designated by him the period of prophylaxis by hygiene, which commenced about 1860, he was especially occupied in placing his patients out of the reach of the three most ordinary causes of death in the hospitals of great cities; traumatic fever, erysipelas, and pyæmia; without attaching great importance to the topical applications employed in the dressings, but laying great stress on nourishment, the ventilation of the wards, the suppression of sponges, etc. The success of M. Guérin's cotton-wool dressing caused him, in 1871, to enter a third period—prophylaxis by hygiene and dressing. In his opinion, the best effect of this dressing was to moderate the intensity of the suppurative inflammation and to modify its nature by compression, which diminished the afflux of blood, by infrequency of dressing, and finally by occlusion. To moderate the inflammation, was to moderate the traumatic fever, that is to say, to diminish the chances of purulent infection. Other innovations supervened, leading to the same results. And first was the plan of half-exposed dressing, modified by M. Rochard with preventive drainage,

termed by M. Gosselin the Auzan dressing, from the name of the operator who made it popular, and of which the essential point was the constant escape by drainage of the liquids as they were produced. Drainage also favoured reunion by adhesive inflammation, and prevented the suppurative inflammation from becoming putrid. The same explanation held good for Lister's dressing, of which the efficacy was considerably more due to its moderating action on the inflammation than to the destruction of the atmospheric germs by carbolic acid. Finally, M. Gosselin had again studied Nélaton's alcoholic dressing, of which the tradition had been preserved by MM. Guyon and Delens. His observations went to prove that alcohol also moderated inflammation very decidedly. He admitted, with M. Guyon, that it first acted by coagulating the albuminous matters of the blood and all its products, serosity and pus, both on the surface of the wound and in the interior of the neighbouring capillaries. He presumed that by this coagulation, and, perhaps, by a constrictive action, it narrowed the capillaries, both of the lymphatics and of the blood-vessels, and thus diminished the afflux towards the wound of the blood which was always putrescible in patients in large hospitals, especially when lost in large quantity. Perhaps alcohol might have a peculiar and inexplicable action on blood which diminished its putrescence. Of all these successful innovations, it was not yet determined which was the most efficacious; further observation, as well as comparison between them, would decide it, if everyone contributed the result of his practice. M. Gosselin described in detail the means to which he had recourse in various circumstances. When in large wounds the disposition of the edges and the surfaces allowed an approximation or a reunion of both, he did not hesitate to adopt the dressing by incomplete approximation recommended by MM. Rochard, Richet, and Trélat. This was the case in disarticulation at the hip-joint.

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#### IMPERIAL ROYAL MEDICAL SOCIETY OF VIENNA.

January 24. *Pelvic Tumours.*—Dr. Chiari showed two pelvic tumours. One was taken from the body of a girl on January 15, and was said to have been developed after an injury. The swelling filled the whole of the smaller pelvis, and extended into the larger pelvis, displacing the uterus and bladder, and causing hydronephrosis on both sides. In some parts it had a bony consistence, while in others it was soft. On section it was found that the tumour, which sprang from the sacrum, had not only grown into the pelvic cavity, but had also passed backwards through the sacrum and the greater sciatic foramen on each side. It was as large as a man's head, and on microscopic examination was found to consist of spindle-cells, having between them rounded spaces filled with giant-cells; portions of it also consisted of bony substance, and in some parts the effects of softening, fatty degeneration, and hæmorrhage could be detected. The tumour belonged to the class designated by Rokitansky "fibrous sarcoma" of bone, by Virchow "myelogenous giant-celled sarcoma", and by Heschl "multilocular osteoma". The second specimen was taken from the body of a woman aged 59, who had died in the Rothschild Hospital of a disease of the kidneys,

accompanied in its last stage by pneumonia. In the region of the sacrum, was a tumour with an uneven surface and bony consistence. On section, it was found that the sacrum and last lumbar vertebra were replaced by a tumour extending into the smaller pelvis, and consisting of a layer of bony substance enclosing a large cavity, in which was a brownish-red pulsatous mass; this consisted of pigment-granules, with some lymph-cells and spindle-cells. Dr. Chiari expressed the opinion, founded on anamnesic data, that this case was one of retrogression and healing of a giant-celled sarcoma.

*The Double Sound and Double Murmur in the Femoral Artery.*—In a communication on this subject, Dr. Winternitz referred to Von Bamberger's statement that the second murmur in the femoral artery in cases of aortic insufficiency was due to a backward flow of the blood, and he endeavoured to gainsay this opinion on the ground of experimental researches made with caoutchouc tubes on a circulatory phantom and a volumetric apparatus. His own opinion was that the second murmur was originally produced in the aorta, and was carried along into the femoral artery by the blood-current.—Dr. von Bamberger said that this view must be regarded as quite incorrect. In the first place, the intensity of the murmur in the aorta and of that in the femoral artery was not in proportion; the former might be very loud, and the latter scarcely audible, and *vice versa*. Secondly, the theory did not enable one to explain how the diastolic murmur was not heard in the carotid, abdominal, or subclavian arteries, but only in the femoral. Thirdly, the murmur was evidently a current-murmur, as in most cases it was only produced by a certain amount of pressure on the femoral artery. It was incomprehensible how Dr. Winternitz could regard the existence of a backward wave as beyond doubt, and yet imagine that it did not cause the murmur. The only question that would arise was, whether the backward wave was strong enough to cause the murmur. This might, indeed, be denied, but it could not be proved. He believed that the suction-power of a hypertrophied heart during its dilatation, in connection with the gravitation of the blood, was sufficient to produce the murmur. The results obtained by the artificial apparatus could not be compared with the phenomena observed in the femoral artery, and the volumetric measurements had no bearing on the question, which did not concern variations in volume in which not only the arteries but the veins and capillaries were concerned.—After some remarks in reply from Dr. Winternitz, Dr. Drasche made some historical remarks on the double sound in the femoral artery, the essential point of which was that the existence of this phenomenon was first pointed out by Skoda, who found it in the arteries of individuals whose hearts were sound.

February 1. *The Cure of Progressive Paralysis.*—Dr. M. Gauster began a paper on this subject by remarking that it was necessary to speak with reserve in announcing the cure of a case of progressive paralysis, since, as both he and others had observed, intermissions occurred in the course of the disease which might simulate the occurrence of complete recovery. These intermissions were of various duration, in some cases lasting from several months to a year; during their continuance, the process of disease appeared to be arrested in all its manifestations. In such cases the symptoms often returned in their most severe form, and rapidly produced a fatal termination. On the other hand, he referred to

the difficulty of prognosis in some cases of progressive paralysis, when these had recently come under observation, as in many of them, though an absolutely unfavourable prognosis was given, the patients finally recovered. It was of the greatest importance, therefore, to find certain points on which to form a judgment in such cases, since the establishment of a less favourable prognosis might exercise a considerable influence on the existence of the individual and on his surroundings. He discussed at some length the conditions which had an influence on the progress of the disease. He had arrived at the conclusion that neither the presence or absence of paralytic attacks, nor the difference between the morning and evening temperatures, nor the difference of the causes, had any influence, but that a favourable prognosis might be made when the intermissions were of long duration, and when during their continuance the patient's nutrition underwent a marked improvement; and that in such circumstances improvement ought not to be despaired of, so long as extremely severe indications of paralysis and mental weakness had not appeared.—Dr. von Stoffella asked what was the condition of the temperature in the apoplectic cases.—Dr. Gauster replied that an elevation of the temperature could be observed.—Dr. von Stoffella said that he had asked the question since it was not yet known with certainty whether the attacks were caused by oedema, hæmorrhage, or vascular contraction in the brain. Charcot asserted that in the apoplectic cases caused by the first-named of these lesions the body-temperature fell after the attack, while it was raised during and after attacks depending on spasm of the blood-vessels.—Dr. Meynert believed that the paralytic attacks were to be simply regarded as attacks of loss of consciousness, and that, while apparently caused by peripheral irritation, they were produced in a reflex manner through defective central inhibition. As regarded the diagnosis of the disease, he held that observations showed that it was not correct to diagnose progressive paralysis in an individual who was the subject of paralytic insanity, if he were under thirty years of age.—Dr. Obersteiner remarked that, in a case of this kind in which severe epileptiform attacks occurred, a temperature of 39.2° cent. (102.56° Fahr.) was observed, and continued fully two days; in another case, in like manner, he had observed a slighter increase of temperature. Speaking of the treatment of the disease, he referred to Ludwig Meyer's plan of applying mercurial ointment to the soft parts corresponding to the supposed seats of the disease in the brain, but observed that the results of the treatment, which was always combined with the internal administration of iodide of potassium, were rather to be attributed to the latter remedy, especially in syphilitic cases.

February 8. *The Treatment of Empyema.*—Dr. Weinlechner read a paper on this subject. He spoke first of the treatment by puncture and evacuation by means of Schuh's apparatus, Dieulafoy's aspirator, etc., and said that this method was of no avail, as it was only in very rare cases that recovery followed, while in most cases the pus again collected, rendering repeated punctures necessary, until at last the patients sank from exhaustion. He then described the methods of treatment by forming a thoracic fistula, and by incision, often followed by resection of part of the rib. He regarded the latter method as preferable, since, in thoracic fistula, the opening often became closed during the contraction of the thorax, and the flow of pus was thus



impeded. He treated empyema by incision under the carbolic spray; the part was subsequently dressed according to Lister's method. He had found that under the antiseptic treatment the operation for empyema was followed by much more favourable results than formerly was the case. He then spoke of the treatment of thoracic fistula, produced either by spontaneous rupture of an empyema or by operation. In all these cases he approved of resection of the ribs, as recommended by Rose, Simon, etc. He had also employed this method for the removal of foreign bodies which had entered the thoracic cavity and could not be withdrawn through the aperture of entrance on account of their size. In conclusion, he said that cases of empyema ought to be operated on as early as possible.

February 15. *Extra-uterine Pregnancy.*—Dr. Chiari showed two specimens. The first was taken from a woman aged thirty-five, on whom he had made a necropsy on February 10. Up to five years ago she had had good health. She then observed a swelling of the abdomen, which steadily increased until, according to her statement, it reached as far as the knee eleven months from its first appearance. It subsequently retracted a little. From this time the patient had been constantly ill. During the last weeks, her condition had become considerably worse. She had very severe pain in the abdomen, and profuse diarrhoea. She died with symptoms of marasmus. At the necropsy, there was found to be a globular projection of the abdominal wall over the symphysis pubis; it was caused by a hardish and movable tumour in the pelvis, as large as a child's head. Closer examination showed that the tumour consisted of a sac lying to the right of and behind the uterus. The wall of the sac was formed of the greater omentum, the anterior abdominal wall, some of the convolutions of the ileum, the right lateral ligament, newly formed connective-tissue membranes, and the muscular tissue of the right cornu of the uterus, which was drawn out into a funnel. The wall of the sac was infiltrated with ichorous matter. The cavity of the sac communicated by a perforation of the size of a pea with the convolutions of the ileum, which partly formed its wall. Below this hole, the mucous membrane of the ileum showed signs of a dysenteric affection, partly recent, partly older. In the interior of the sac, besides gas and ichor, there was found a foetus in an advanced stage of decomposition, apparently, from the size of the bones, nearly of full term. It was thus apparent that the case was one of extra-uterine (interstitial) pregnancy commencing five years ago, which had recently undergone decomposition and had led to perforation of the intestine. The second preparation was taken from a woman aged 32, whose body was examined on February 3. She had been confined four times. The catamenia had appeared for the last time in November 1877. In December she had hæmorrhage from the genitals, with discharge of shreddy matter. From this time the patient had severe pains in the abdomen, and on examination this was found to contain a fluctuating tumour of the size of a child's head, lying behind the uterus. On January 30 there was a sudden discharge of ichorous masses *per anum*, and she died in a state of collapse. On *post mortem* examination there was found behind the uterus a sac as large as a child's head, bounded by the cæcum, the lowest portion of the ileum, the greater omentum, the sigmoid flexure of the colon, and the thickened peritoneum of Douglas's pouch; it contained ichorous matter and fresh blood-clot.

On closer examination the left Eustachian tube was found to open into the cavity of the sac; folds of it lay on the inner wall. Between the folds was the left ovary, in which was a cavity about the size of a walnut, filled with blood of a brownish colour. Dr. Chiari was of opinion that the case was one of retro-uterine hæmatocele, followed by perforation of the sigmoid flexure, and hæmorrhage, and that the origin of the lesion was the bursting of an early ovum in the abdominal half of the left Eustachian tube.

*Tumours in Cervico-brachial Neuralgia.*—Dr. von Stoffela stated that he had observed three cases of cervico-brachial neuralgia, in each of which a firm elastic swelling, the skin over which was healthy, was found in the supraclavicular fossa and on the side of the neck. He believed that it was due to a disturbance of the nutrition of the part caused by neuralgia (*i.e.*, by the neuritis on which this depended). He expressed no opinion as to the precise character of the tumour.

*Resection of the Lower Jaw in Removal of the Tongue.*—Dr. Dittel described the methods which had been employed for fixing the lower jaw in resection of this part in order to remove the tongue. He had followed the method of Dieffenbach and Langenbeck in two cases. In the first case, in which he united the sawn surfaces of the bone by silver sutures, necrosis took place in the track of the sutures, and was followed by supuration and exfoliation of bone. In the second case, he applied to the jaw a fenestrated plaster-of-Paris bandage, which fulfilled the objects required. He believed that a simple bandage of this kind would be useful also in cases of resection of the jaw for other reasons.

*Large Uric Acid Calculus.*—Dr. Dittel showed a large hard uric acid calculus, weighing more than seven ounces. He had endeavoured to remove it by lateral lithotomy, but, on account of the size of the stone, was obliged to have recourse to transverse section. The patient apparently went on well for several days, but collapse set in suddenly, and he soon died. No necropsy could be made.

March 8. *Argyria.*—Referring to his former communication on argyria (*see* LONDON MEDICAL RECORD, vol. for 1877, page 206), Dr. Neumann gave the history of another case which he had observed during life, and in which a necropsy had afterwards been made by him, and a microscopic examination of the skin and internal organs by Dr. Weichselbaum. The subject was a medical man, aged 77, who, it was said, had been in the habit for twenty years of injecting with a syringe a solution of nitrate of silver (24 grains in three ounces of water) on account of a disorder of the stomach. This treatment relieved the stomach-complaint, but it produced discoloration, affecting especially the skin of the face, head, neck, chest, and back, while there was but little change in the extremities and mucous membranes. The first-named portions of the skin were coloured as if with plumbago. The patient died of pleuritic exudation. On *post mortem* examination the skin was found to be of a slate-grey colour, and microscopic examination showed that silver was deposited in the form of granules and streaks in the cutis; most thickly so in the papillæ, also on the outer wall of the hair-follicles and sebaceous glands, and especially on the convolutions of the sweat-glands. Here and there the silver was found in the sarcolemma of the muscles, in the middle and adventitious coats of the blood-vessels, in the neurilemma, and between the fat-cells. The epithelial structures of the skin (the rete Mal-

pighii, the epithelium of the sebaceous and sweat-glands, and the root-sheaths of the hair) were, as well as the epithelioid lining of the vessels, free from deposit of silver.—Dr. Weichselbaum described the *post mortem* appearances, and the results of microscopic examination of the internal organs. There was a dark grey colouring of the surfaces of the articular cartilages, of certain parts of the dura mater, of the papillæ of the tongue, the thyroid body, the endocardium, the lining membrane of the aorta, the parts of the liver near the large vessels, the capsule of the spleen, and the medullary substance of the kidneys and suprarenal bodies. The mucous membrane of the stomach was of a dark grey colour, and some of its vessels were almost black. The mesenteric glands were sprinkled and striped with a blackish deposit. The mucous membrane of the renal pelvis and ureters was dark grey. On microscopic examination, the silver was found to be deposited in the form of very fine granules, sometimes accumulated in masses or streaks, but otherwise producing a diffuse brownish colouring of the tissues. The silver was deposited only in the walls of the vessels and in the connective tissue, in the intermediate substance of the cartilage tissue and in the *membrana propria* of the glands. The silver was for the most part most thickly accumulated where the connective tissue was most dense. A chemical examination of the granules made by Dr. Kratschmer proved beyond doubt that they contained silver; but it was not yet determined whether it was in combination with sulphur or with chlorine. With regard to the question how the organism becomes impregnated with silver, Dr. Weichselbaum agreed with the opinion already expressed by Frommann, that the nitrate of silver is converted into an albuminate of the metal, which is carried either directly or through the medium of the lacteals into the blood, where it is dissolved, and deposited in the walls of the vessels, a portion passing on in the current.

## REVIEWS.

*On the Treatment of Psoriasis by an Ointment of Chrysophanic Acid, with Appendix.* By BALMANNO SQUIRE, M.B. Pp. 99. London: Churchill. 1878.

This is No. 4 of a series of essays written, or to be written, by Mr. Squire on the treatment of skin-disease, and, like most of his writing, it is very practical, very readable, and distinctly original. His attention was drawn to its subject by a patient who had learnt in China to cure his patches of psoriasis by "Goa powder", which was otherwise known to most of us only as a remedy in parasitic skin-disease. Chrysophanic acid being the active element in this substance (85 per cent., Attfeld), and being stable and definite in composition, suggested itself as the scientific substitute.

The first cases of psoriasis treated by it were recorded by Mr. Squire in the *British Medical Journal*, November 1876, and have since been supplemented, so that the name, at least, of the remedy is familiar. The letters of Dr. Radcliffe Crocker and others are given in the appendix, and Mr. Squire acknowledges their work on the subject. "To communicate to fellow-workmen any technical advantage which may have accidentally come to oneself is a duty of a commonplace kind, but it is not so commonly ac-

knowledgeed as a duty . . . frankly to accept the statements of a fellow-worker for what they may be worth, to impute to them the credit of being worth testing . . . and to communicate the result."

The pamphlet then refers to the nature of the remedy, the method of its application, its advantages and drawbacks; and we may briefly resume the latter points. After trials with benzol, etc., the following formula has been found best.

R. Chrysophanic acid, gr. v. to ʒij; lard, ʒj.

Digest the acid in the lard at the temperature of boiling water (water bath) for half an hour, stirring constantly. When "set", mix with pestle and mortar, adding a few drops of essential oil (for scent). It will be seen that a wide margin is allowed in the strength of the preparation; the weaker forms require naturally longer use, but it is safer to commence with them, for in the higher strengths "the acid is apt suddenly, and, to the inexperienced, unexpectedly, to take on a violent action. This apparent treacherousness of it, which, like any kind of treachery, can only harm those who are unprepared", is a special peculiarity.

Raw surfaces, or those once irritated, are quickly affected by it when the adjacent sound skin is not.

"No advantage is to be derived from pushing the remedy with impetuous haste. All patients are free agents, and the treatment of any disease embraces the treatment of the patient himself, as well as of his disease. No intentions, however excellent, of curing this can avail if the patient withdraw himself from their operation; and in this remark I do not include the minority of the unreasonable amongst patients."

Before using the ointment, the skin should be wiped with rag moistened with benzol, to remove the natural secretion, and scales should be softened with soap and water, and removed with a blunt knife. A strength of two drachms to the ounce will produce a "dusky erythematous redness", which may alarm more than a brighter colour. It may be markedly "punctate", affecting most the hair-follicles. It is caused in part by stimulation of the capillaries, and in part by the potash in the cuticle acting as a mordant to the colouring matter of the acid. Continued applications produce a brighter redness, and burning and tingling, which may become very severe, and inflammatory thickening of skin, with œdema of the subcutaneous cellular tissue.

Its effect on the spots of eruption is curiously different, for these become white and smooth, and contrast vividly with the dingy colour and harsh surface of surrounding skin. On omission of the treatment, however, this subsides.

Mr. Squire makes some ingenious remarks on the different modes exerted and depths of skin influenced by various stimuli and irritants, and finds an explanation of the special value of the remedy in question in the *depth* to which it can influence the skin, and its power of inflaming *subcutaneous cellular tissue* without irritating the *surface*, like blistering fluid, or the *lower* skin-layers, like iodide of mercury.

The acid is apt to damage the linen as well as the skin and the nails, but does not corrode; and its disadvantages are contrasted in Mr. Squire's peculiar humorous style with those of sulphur and pitch. The linen-stains are at first yellow, and are removable by benzol, but become purple and fixed by the alkali of soap. The hair also may be cleaned by oil and benzol, if soap be not used. Our own experience of œdema of the eyelids produced by applications in their neighbourhood, has prevented us from again order-



ing chrysophanic acid for psoriasis of the scalp ; but Mr. Squire tells us that he was able to treat a case of this kind, affecting even the forehead, by ordering a well-fitting linen night-cap, and the cleansing of the fingers by benzol after each use of the ointment. With this slight exception, we have been able to confirm somewhat extensively in hospital practice every observation made by Mr. Squire, and we are much indebted to him. We have now only to add that he has applied the remedy in other chronic skin-diseases, chronic eczema, lichen planus, etc., and especially he records its power in chloasma, not only of curing, but also of assisting the diagnosis of faint patches by dyeing the fungus red or brown. The whole essay is well worth reading.

*Clinica Chirurgica della Reale Università di Pisa : Resconto Sommario dell' Anno Accademico 1876-77.* Per il Dott. D. BARDUZZI, Assistente alla Clinica predetta. Pisa. 1877.

*Surgical Clinic of the Royal University of Pisa : Summary for the Academical Year 1876-77.* By Dr. D. BARDUZZI, Clinical Assistant.

This report is reprinted from the *Commentario Clinico di Pisa* for October 1877. The number of cases is 126 (78 men and 48 women) ; they are, moreover, in general of a very ordinary description, and have been treated by well recognised and approved methods, with an average amount of success. Perhaps the most striking feature is the fact that the in-patient department of the professorial clinic in a university hospital may consist of only 126 patients in a single year ; this, supposing each bed to accommodate about ten cases, would, by rough computation, make out the number of beds at the surgeon's disposal to be about 12. It should be added that this small number of in-patients is backed by an out-patient practice of 4,371 (which may be computed at 15 cases *per diem*). The cases are collected systematically, and arranged methodically in a tabular form divided into four columns :

1. Names of diseases, classed pathologically (abscess, wound, bone, or joint-affection, genito-urinary, eye, etc.) :

2. Treatment and operation, etc. :

3. Result (cure, relief, failure, death) :

4. Complications, and other remarks.

This system, implying a critical study and written catalogue of how small soever a number of cases, is worthy the attention of all whose purpose, in pursuing or teaching the surgical profession, is the desire to have and to communicate a clear idea of what they are about. The facts remain for all time ; while the point of view from which these facts are regarded, or the opinions to which they may give rise, must vary more or less with accumulated experience. Experience based upon written records, as well as upon mental recollection, it is unnecessary to defend ; and it is mainly as a specimen of terse and orderly record that this paper is of interest.

*Report on the Prevalence of Phthisis in Victoria.* 1877.

This is a report of a Committee appointed by the Medical Society of Victoria, to inquire into the vexed question of the prevalence of consumption in that Colony and its alleged increase, and it is framed with the view of testing some of the conclusions deduced by Mr. William Thomson in his various

analyses of the Statistics of Phthisis in Victoria. The following are the conclusions of the Committee.

1. The mortality from phthisis in Victoria is little more than half of that in England.

2. The rate of mortality from phthisis in Victoria has been perceptibly less of late years.

3. That rate is especially low among persons under 15 and 20 years of age, and has been very greatly reduced between 1861 and 1871.

4. The reduction of the mortality of young persons is to be explained by a comparative immunity among those born in the colony.

5. The apparent increase of mortality among young adults is due to the influx of phthisical persons from abroad.

6. The uniformity in the rate of mortality over the whole colony for a good many years, is owing to certain insanitary conditions, operating especially in Melbourne, since for the rest of the colony the rate was reduced by about one-third between 1861 and 1871.

With regard to the first conclusion we are inclined to agree with the explanation of the report, that the low rate of mortality from phthisis in Victoria is due to, not one but many causes, *e.g.* (1) the good and abundant food enjoyed by all classes, even by the lowest ; (2) to the absence of injurious trades and to the less crowded state of the population ; (3) to the smaller amount of inflammatory diseases of the lung, which lead to the development of consumption.

The contrast between the mortality from phthisis at Melbourne and in the rest of the Victorian colony is very great, being in 1871 22·29 per 10,000 inhabitants in the former, and 7·24 per 10,000 in the latter.

This report, with its tables, is very acceptable, as clearly vindicating the sanitary character of the Victorian colony, in showing that its mortality, at all times low, has been gradually diminishing of late years.

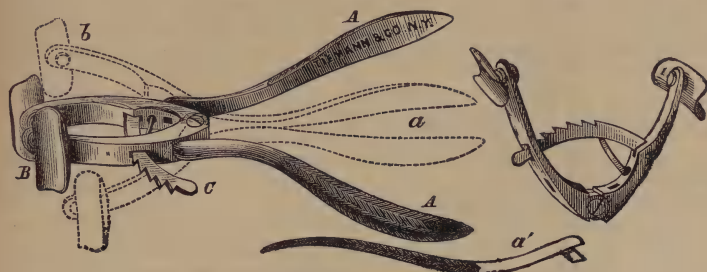
C. THEODORE WILLIAMS, M.D.

## NEW INVENTIONS.

### A NEW MOUTH-GAG.

Dr. Robert F. Weir, Surgeon to the New York and Roosevelt Hospitals, describes in the *New York Medical Record* a gag, which, he says, is intended to more satisfactorily accomplish an end than has hitherto been done by the various mouth-gags now in use. The one devised by T. Smith, of London, and modified by Whitehead, is cumbersome, and the tongue-depressor attached to it is liable to cause interference with the breathing during the state of anaesthesia. Francis Mason's gag, otherwise excellent (*British Medical Journal*, January 22, 1876), has such awkwardly long handles attached to it, that they are in the way of the operator and his assistants. The gag which has been of the most service in the operations performed on the mouth at the Roosevelt Hospital, has been that known as Hutchinson's (of London). It is depicted on page 606 of Holmes's *Treatise on Surgery* (American edition), and commends itself by the small space it occupies in the mouth. It is, however, somewhat difficult to introduce, unless the jaws are first considerably separated ; and also, by reason of its expansion being limited by the elasticity of the flat steel springs which enter into its construction, it is frequently dislodged by

the voluntary or involuntary efforts of the patient. The first objection is, however, the most important, and to meet this as well as the last, the changes depicted in the accompanying woodcut have been made.



Dr. Weir's Mouth-Gag.

Instead of trusting to the action of a spring, the hinge has been substituted, with movable handles (*A*, *A'*), thus permitting the jaws of the gag to be entirely closed (*B*), and facilitating its introduction between the teeth. It also allows, by the leverage of the handles, the fullest distention of the mouth. After this has been satisfactorily accomplished, the little ratchet holds the jaws firmly apart. This ratchet is easily unloosened; in the diagram, however, it is placed too far from the hinge. After its introduction, as in Hutchinson's instrument, it is turned to one or the other side of the mouth, out of the surgeon's way, on the pivots by which the tooth-cups (duly lined with lead or India-rubber) are attached.

It has now been tested a number of times, and has been found to answer its purpose very efficiently.

#### MESSRS. FINDLATER, MACKIE, AND CO.'S WHISKIES.

Two years ago, when the Adulteration of Food Bill was before the House of Commons, in consequence of remarks made during the discussion on the Bill, a whisky war arose, which, although confined to manufacturers and dealers of the article, almost equalled in violence its Transatlantic namesake. Mr. O'Sullivan was the gentleman who brought the question into prominence by moving in the House of Commons an amendment to the Bill, having for its purpose the prevention of the sale of what is known as "silent" whiskey. This, he said, he had induced a friend to taste, drawing from the taster the comparison of "a torchlight procession going down his throat". This distillation was worth 2s. 8d. a gallon, against 6s. the value of genuine whisky. In a correspondence that took place in the press upon this subject, it was urged that in the manufacture of "silent" whisky there were used a very large number of vegetable substances which could be made to yield ardent spirit by distillation, and several varieties of flavouring. But the newly distilled spirit is never fit for human consumption, and only after a lapse of time, by reason of the chemical changes which the mixture brings about, can pass into a compound of an agreeable character. As in the case of wine, the only good results are derived from allowing the maturing process to proceed in bulk and at a natural rate; the consequence being that consumers of alcohol are in a medical and hygienic sense, as well as from the verdict of the

palate, right in highly esteeming old spirits. It is, however, not the distillers, but bonders, such as Messrs. Findlater, Mackie, and Co., and others, who hold stock sufficiently long to enable it to complete the necessary process of rendering whisky palatable and wholesome. The distiller sells as fast as, or perhaps even faster than, the spirit is distilled, but the bonders we have mentioned, in their extensive establishments, both in Ireland and in Scotland, store the newly purchased spirits in large quantities, and there keep it for a number of years. Messrs. Findlater, Mackie, and Co., when selling the article which they purchase in the raw state, and by patience and attention perfect, do not quote the name of the distiller, who only

performs part of the work, leaving undone not the least important; but they assert that they purchase only the best article, the production of the old-fashioned "pot" stills. In these the process of distillation is so managed, as to bring over a product of proper fineness loaded with only so much essential oil as will undergo the desired changes within a reasonable time. In the case of what is known as their Best Old Irish Whisky, at the end of the allotted time, the fusel oil which it once contained has undergone conversion into other compounds, and there remains a spirit which, having had samples from retail and other stores in the ordinary method of purchase, we found to be singularly pure and free from the tendency to produce acidity. The flavouring of Irish whisky, which to the connoisseur is of much importance, arises from its storage in newly emptied sherry casks; and its yellow or straw colour from the same source. Its age is great, and its quality uniform. The latter is, we are informed, due to a system which has been practised by Messrs. Findlater for more than a quarter of a century, of refilling the immense stock-vats when only partially emptied. Thus they are enabled always to meet the demand for old whisky which the firms, not possessing the required means of storage, are unable to do. Of their Scotch whiskies, that which they vend as the Best Islay Malt Whisky, is the produce of the finest Islay and Highland malt. It is stored in oak spirit-casks, and has, unlike its Hibernian fellow, no artificial colour or flavour. Its strongest claim to approval lies in its peculiar peaty soft flavour. This flavour is obtained in an early period of manufacture by drying the malt in a kiln heated by a turf or peat fire, from which the smoke permeates the malt. The softness is developed by age only. We cannot enter upon the question of blending, which forms no mean part in preparing whisky for consumption, but we have said already sufficient to indicate our opinion that Messrs. Findlater, Mackie, and Co. have legitimately maintained their high and deserved reputation for the sale of Scotch and Irish whiskies.

#### RECENT FRENCH BOOKS.

*Published by Germer-Baillière.*

*Etude critique sur la pathogénie de la mort subite dans la fièvre typhoïde*, par le docteur Henri Huchard. Une br. gr. in-8. 1 fr. 25.  
Du pincement des vaisseaux comme moyen d'hémostase, suivi de la monographie sur la forcipressure de MM. les docteurs Denis et Exchaquet. Par M. Péan. Paris, 1877, 1 vol. grand in-8 avec figures. 4 fr.



Published by J. B. Baillière and Sons.

Pratique de la chirurgie des voies urinaires. Par M. Delefosse. Paris, 1878. 1 vol. in-12 de ix-522 pages avec 123 fig. dans le texte. 6 fr.

Published by Octave Doin.

Traité des Maladies des Yeux, par le docteur Ch. Abadie. 2 vol. in-8 de 500 pages, avec 134 fig. dans le texte. 20 fr.  
De l'alcool éthylique et de la transpirabilité de quelques alcools mono-atomiques, par le docteur Collignon. In-8 de 68 pages. 3 francs.

Étude physiologique et clinique sur les alcaloïdes soporifiques de l'opium, codéine, morphine, narcéine, par le docteur Bardet. In-8 de 41 pages. 2 francs.

Étude sur un nouveau moyen d'aspirer les fluides pathologiques, par le docteur Gibard. In-8 de 48 pages, avec la figure du nouvel aspirateur. 2 francs.

Published by G. Masson.

De la cécité des couleurs dans ses rapports avec les chemins de fer et la marine. Traduit du suédois avec l'autorisation de l'auteur. Par M. F. Holmgren. 5 fr.

La morphomanie-monographie basée sur des observations personnelles. Par M. Ed. Livinstein. Paris, 1878. 1 vol. in-8 de 155 pages. 4 fr.

Typhus et fièvre typhoïde. Mémoires honorés d'une médaille d'argent et d'un rappel de médaille par l'Académie de médecine. Par M. Masse. Paris, 1 vol. in-8 de 230 pages avec tracé graphique.

Published by V.-Adrien Delahaye et Cie.

Le Diabète sucré, de son traitement et de sa guérison, par le docteur Blanchet. 1 vol. in-12. 4 francs.

Des idées de grandeur dans le délire des persécutions, par le docteur Garnier. In-8. 2 fr. 50.

Nourrices et nourrissons syphilitiques, leçons professées par le docteur A. Fournier, médecin de l'hôpital Saint-Louis, etc. In-8. 2 fr. 50.

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Die Secretion des Schweißes. Eine bilaterale-symmetrische Nervenfunction. Nach Untersuchungen am Menschen und an Thieren dargestellt, von Dr. Alb. Adamkiewicz. 1878. gr. 8. 2 Mark.

## MISCELLANY.

THE funeral service of M. Claude Bernard took place at Paris, at the public expense, on Saturday, February 16, at St. Sulpice, in presence of an immense assembly. The interment took place at Père-la-Chaise. The chief mourners were MM. Bardoux, the Minister of Public Instruction, Dumas and Bertrand, Perpetual Secretaries of the Academy of Sciences; M. Paul Bert, who is filling the chair of Claude Bernard at the Jardin des Plantes; and Laboulaye. These gentlemen delivered addresses at the grave, which are published in the *Comptes Rendus* and *Revue Scientifique*.

THE ZOOLOGICAL STATION AT NAPLES.—From the last report of Dr. Dohrn, the director, it appears that the zoological station at Naples has developed a most remarkable degree of activity, and is becoming a valuable centre of biological research. By the generosity of the Prussian Government it has been provided with a small steamer, and the uninterrupted expeditions in this vessel have secured to the laboratories an enormous and most varied stock of material for research. Dr. Dohrn has carefully organised a plan for the systematic examination of the entire fauna of this part of the sea, to be accompanied by exhaustive description. The literary portion of the work will consist of elaborate monographs on all the families and species represented in the Gulf of Naples. They will not be prepared by the members of the station only, but it is hoped to procure the assistance of all familiar with this special department, and the contributions can be in English, French, German, or Italian. Two monographs on the Elenophoræ and Balanoglossi will appear during the present year, and arrangements have been made for the speedy preparation of eleven others. These will all be based, in regard to nomenclature and classification, on a work shortly to appear under the title, *Prodromus Fauna Mediterranea*, which will contain a complete abstract of the literature on this subject up to the present time. The details of anatomical and embryological investigation will form the leading feature of the whole work.

ROYAL SOCIETY.—At a recent meeting of the Society, Mr. E. A. Schäfer communicated a paper on the nervous system on *aurilia aurata*. His work was done in conjunction with Mr. Romanes. Professor Parker's paper on the

structure and development of the skull of the common snake was read. Fifty embryos have been placed at his disposal by Dr. Braun of Würzburg; and, knowing that the key to the meaning of the skull of all the reptiles and birds in one huge group was to be found in that of the serpent, he has carried out his work with that idea before him. There were, he found, but few paragraphs in Foster and Balfour's monograph on the development of the chick which did not apply to the snake embryo, and the figures of their monograph would almost equally well do for either.

**HALLUCINATIONS OF SENSES.**—Dr. H. Maudsley recently gave a lecture at the London Institution on "Hallucinations of the Senses", opening the subject by alluding to the historical case of Joan of Arc, who firmly believed that the words she appeared to hear really came from external sources. One striking feature observed by medical men who have had cases of hallucinations under their charge is that the patients cannot be convinced that the objects they see, the sounds they hear, and the smells they perceive have no real existence, and that the sensations they receive are the result of their excited nerves. It frequently happens that a person who suffers from hallucination in respect of one sense has the others unaffected, and is on all other matters perfectly sane. Hearing is most frequently affected, and sight next. Several interesting cases were referred to, one of a gentleman actively engaged in business who believed his body continually gave an unpleasant odour, and consequently kept away from everybody as much as he could, and when he was assured that people did not perceive it, always replied that they were too polite. Hallucination may arise either from an idea on which the mind has dwelt appearing as something exterior or from excitement of the sensory ganglia. It is said that Newton, Hunter, and others could, at will, picture forms to themselves till they appeared to be realities. A successor of Sir J. Reynolds, Dr. Wigan records, had the power of painting portraits after seeing his sitters but for a short time at one visit only, and was able at will to reproduce them to himself as exterior realities. As years advanced he found he could not dismiss these forms as he could recall them, and he began to fancy himself haunted, and was for many years in an asylum. The opening of Act 5, scene 1, of *A Midsummer Night's Dream* was referred to as showing that Shakespeare recognised different degrees of hallucination. Luther's apparition of the Devil was a good illustration of an idea taking an external form, not at will, but unconsciously, and so appearing as a reality. Illustrations of the production of hallucination from the second class of causes, excitement of sensory ganglia, were drawn from cases of the use of belladonna, of over-doses of alcohol, of fevers, and of exhaustion of nerve centres. Under the last head come visions seen by people after long fasting. "Visions" and "voices" frequently precede epileptic fits, and after the fit the patient believes in the external reality of the objects and sounds. Reference was made to the "voices" and "visions" of Mahomet, and, after speaking of the probable physiological explanation, Dr. Maudsley said it was, in the practical result, of little importance whether they were realities or hallucinations. His mind had been dwelling on the subject of his work, and he had fitted himself for the task he did. In concluding, he said the way to avoid hallucinations is to keep in health and feed the mind with the teachings of nature and of fact.

**PRESERVED VEGETABLES.**—The influence of desiccation on vegetable substances, and the extent to which preserved vegetables differ from fresh vegetables, if, indeed, they differ at all or in any important degree, are matters of much interest to the druggist and medical practitioner, who frequently use dried herbs and dried parts of plants, and to the general public, who largely use preserved vegetable foods. A few months ago, by request of the Chairman of the Admiralty Committee appointed to consider the causes of the outbreak of scurvy in the recent Arctic Expedition, Dr. Atfield, Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, analysed samples of vegetables taken from the residual stores of the *Alert* and

the *Discovery*, on the return of those ships to England. The results of the analyses and general examination he states shortly as follows. 1. The preserved carrots were of good quality; 2. The preserved potatoes were of good quality; 3. The preserved cabbage was deficient in saline constituents; 4. The specimen of preserved mixed vegetables was probably somewhat deficient in saline substances. Whether or not these conclusions may be applied to the similar preserved vegetables supplied to the public generally, cannot, he says, be definitively decided until more analyses have been published. From the examinations now described, however, and from general physical examinations of many other samples of preserved vegetables made since these experiments were completed, it is evident that, in the matters of colour and general appearance, preserved vegetables can be sent to table in a condition very closely resembling the fresh articles. Properly soaked, dried vegetables also reabsorb almost their normal proportions of water, and become normally tender and juicy. In drying cabbage, it would be better to cut out and exclude stalks and thick midribs altogether, rather than so to press them as to risk loss of juice and retention of mere fibre; for the saline substances in the juice are, physiologically, probably amongst the most important of the constituents. As regards flavour and odour, it is a question whether the very fugitive substances on which they depend can be retained entirely during either desiccation or any heating or steaming process; at the same time, except perhaps in the case of fruits of very delicate flavour, the taste and aroma remaining in the preserved article will probably fully satisfy the nose and palate of those who really desire such vegetable food, and are unable to obtain it in the fresh condition. Preserved vegetable substances, roots, fruits, etc., are already largely used by the public. Dr. Atfield is of opinion that, on the whole, they well deserve the confidence placed in them.

**RICHARDSON'S PRICES CURRENT.**—Messrs. John Richardson and Co. have issued a new and enlarged price-list which, in fact, constitutes a very useful book of reference to members of the medical profession. It includes a list of drugs, chemicals, and pharmaceutical preparations; a list of appliances and surgical instruments; pearl-coated pills in a very large variety of useful formulæ; a catalogue of medical specialties for which this house has for more than seventy years had a just reputation; and to this is appended a series of notes on recent drugs conveying a great deal of useful information and compiled from medical sources. The book is completed by the addition of a diary. Medical men will find here references to a great number of preparations and appliances of much practical value which illustrate in a favourable manner the ingenuity and enterprise of the firm in providing for the ordinary and extraordinary wants of medical practice.

**PROTOPLASM.**—In a lecture recently delivered at the Royal Institution, Professor A. H. Garrod said that he believed the original idea of a cell, as first taught by Schleiden and Schwann, is incorrect. The use of the reagents they employed, to get clearness as they supposed, really brought about artificially those changes which led them to believe that a cell consisted of cell-wall, cell-centos, nucleus, and nucleolus. He would define as a cell a separate mass of protoplasm, whether surrounded by formed material or not. This formed material comes from the precipitation of salts of lime by the protoplasm and from the formation of hyaline, etc. In this way, the tissues of the body are built up. In the growth of the epidermis, the cells are gradually more and more filled with precipitated matter, the protoplasm occupies less and less space, and finally the cells die and are removed from the surface. In fatty tissue, the hydro-carbons of the food are gradually precipitated in the cells till the protoplasm becomes only an investing membrane. The muscular tissue is material formed by protoplasm, but is not itself alive. Allusion was made to the statement of the striation of muscles mentioned in most text-books. Mr. Schäfer's microscopic observations on the leg of the water-beetle suggest that this is a deceptive optical effect rather than a reality. In speaking of



the elastic tissues precipitated from protoplasm, the ligament which supports the head of quadrupeds was specially referred to, and Professor Garrod said he thought that many who had written about bearing-reins did not know that this ligament, when strong and healthy, holds up the head of the animal without effort, and that it is an effort for the animal to get its head down to feed or drink. Some young animals keep this ligament on the stretch too much, a bad habit which the bearing-rein tends to correct. After speaking of nerve-tissues being evolved like all the other tissues from protoplasm, Professor Garrod referred to the foods that have to be taken to supply this protoplasm. As is well known, writers on foods group them into organic and inorganic, with the organic again subdivided into nitrogenous and non-nitrogenous. The nitrogenous foods, it is now believed, contrary to Liebig's first teachings, are those used in repairing the "machinery" of the body, while the non-nitrogenous furnish the source of power for action—play the part of fuel, as it is often popularly put.

THE society lately formed for the protection of the interests of chemical manufactures in Germany, begins with the present year the publication, at Berlin, of a monthly organ entitled *Die chemische Industrie*, under the editorship of Dr. Emil Jacobsen. It is intended to make it a complete record of everything of interest in the department of technical chemistry.

STICKS OF COPPER SULPHATE.—Four parts of copper sulphate and one part of borax triturated together, are said to form a mass that can be rolled into sticks at pleasure for cauterising purposes.—*New Remedies*.

EUCALYPTUS OIL.—Mr. M. H. Lewellin, writing to the *Melbourne Medical Record*, says that he has found eucalyptus oil very useful in repelling the attacks of flies. It may be partially saponified by heating on the water bath an ounce of oil with two or three drachms of carbonate of soda. This quantity will then dissolve in a quart of water. It may also be dissolved in rectified spirit, and used as a face lotion or as spray in the sick room. As long as the scent remains, no Australian fly will approach.

THE CAUSES OF DISGUST.—An interesting paper, bearing this title, by M. Charles Richet, is printed in a late number of the *Revue des Deux Mondes*. The author considers disgust, when analysed philosophically, to be an instinctive sentiment of protection, varying with species and with the alimentation, habits, and education of individuals. But under this apparent diversity there is the general law of finality; and it is not by chance that our disgust attaches to such and such a being or substance, but in consequence of the hereditary instinct which has apprised our ancestors that these animals and substances might be dangerous for us. Disgust sometimes attaches to the total form of objects, and may diminish and become extinct as scientific analysis disjoins the parts of the repugnant whole. Thus, a spider, viewed as a whole, is a repulsive creature; but take a leg or an eye of it and study in the microscope the marvellous arrangement of these organs, and the sight will awaken admiration instead of disgust. Again, habit is evidently an important factor in feelings of disgust. Thus, to eat frogs or snails is repugnant to us, yet we eat without disgust such things as black pudding, tripe, liver, high game, and decayed cheese. The aversion to horse-flesh is not readily accounted for, except by habit.

SALT-WATER DRINKERS.—The *Journal de la Société de Médecine de Caen et de Calvados* publishes a description of salt-water drinkers, taken from an account of a voyage to the Oceanic Islands by M. Jouan, a ship's captain, and sent by him to a medical man at Caen. These people are met with on the madreporic atolls of the Pacific, such as the Paumotu Islands, where there are neither brooks nor springs, and where the wells which have been dug yield only brackish water. The vegetation is limited to a few cocoanut-trees, of which the milk, with sea-water, constitutes the only drink of the natives. The fact of men

habitually drinking salt water is inexplicable; but it is affirmed by many navigators. Cook and Lapérouse both mention it, and more recently Dupeut-Thouars has described the inhabitants of Easter Island drinking sea-water without any inconvenience from it. M. Jouan concludes his observations on the drinking of sea-water by a fact which he asserts to have seen at the beginning of his sea-faring career, in 1838, while going to Mexico. At that time there were no distilling apparatus, so that in long voyages it was necessary to be careful with the water; and in his ship, with the number on board nearly doubled by some troops, and the prospect of not finding any water on the way, since they were only going to blockade the coast without communicating with the shore, they were specially careful in its use. Some sailors consequently began to drink sea-water, but were soon obliged to leave it off. One man only persevered until the ship arrived at Mexico, when it was revictualled with fresh water brought at great expense from Havanna. This man never complained of the sea-water; the only difference remarked in him was that he became more and more yellow.

JAPANESE THERAPEUTICS.—Dr. G. Maget has furnished on this subject some interesting notes. General and local abstraction of blood is rejected by Japanese practitioners on the plea that the blood is too precious a fluid to be thus wasted. Febrile affections are chiefly affected by copious draughts of warm water, under the idea of relaxing the pores which have been constricted by cold. Calomel is a very favourite remedy, and is better supported by the natives than by Europeans. Blisters are popular; they are made with the powder of the *Pagara piperata* spread on a rice plaster. Moxas are very frequently had recourse to as derivatives. Their active principle is extracted from the *Artemesia Japonica*. In less urgent cases acupuncture is employed, as in China, to replace the moxa, chiefly in abdominal affections, twenty needles being inserted on each flank. Shampooing is a very popular treatment in rheumatic affections and certain cases of nervous debility; also as a hygienic precaution against the fatigue of a long journey or of protracted labour. The Japanese ladies are so extremely modest that they employ none but the blind to shampoo them. Syphilitic affections are common, and are combated by cinnabar (red sulphuret). The soft sore is much more frequent than the hard one. In Japan, as elsewhere, the introduction of the evil is attributed to a neighbouring country.—*Philadelphia Medical and Surgical Reporter*.

MOUTH WASHES.—*A Wash to Harden the Gums*.—Take  $\frac{1}{2}$  pint Jamaica spirits,  $\frac{1}{2}$  teaspoonful each of powdered alum and saltpetre, pulverised, and 1 oz. of pulverised myrrh; mix.—*Sosodent*.—Take salts of tartar,  $\frac{1}{2}$  oz.; honey, 4 ozs.; alcohol, 2 ozs.; water, 10 ozs.; oil of wintergreen and oil of rose sufficient to flavour.—*For Unhealthy Gums*.—Unhealthy gums are very common. A lotion made from the following receipt will be found valuable in restoring them to a healthy condition: Carbolic acid, 20 drops; spirits of wine, 2 drachms; distilled water, 6 ozs. Use first a soft tooth brush with water, after which pour on a second tooth brush, slightly damped, a little of the above lotion. After using this for a short time the gums become less tender, and the impurity of the breath, which is commonly caused by bad teeth, will be removed.—*Dental Science*.

MOSLER'S TAPE-WORM BOLUS (*Boli tenifugi*, Mosler).—Florum cusso, 30 grammes; kamalæ, 15 grammes; ext. filicis liquidum, 4 grammes; mellis, q.s. Mix and divide into 60 boluses, which may be sprinkled over with powdered cinamon, and of which thirty should be taken in the evening, and ten or twenty more the following morning.—*New Remedies*.

FRECKLES.—Take of finely powdered sulphophenate of zinc, one part; oil of lemon, one part; pure alcohol, five parts; collodion, forty-five parts; mix well together by trituration. This has been found efficacious as a local application against freckles and other slight skin diseases.—*Pharm. Zeit. für Russ.*

# The London Medical Record.

## GIOVANARDI ON A NEW SIGN TO DETERMINE WHETHER A NEW-BORN CHILD HAS BREATHED.\*

It is no longer a matter of doubt that a child may live some time out of the uterus without breathing; and in some exceptional cases an expert may be able to prove that extra-uterine life has been maintained, although respiration may not have been effectually performed. It is also admitted that the only certain proof of extra-uterine life is to be found in pulmonary respiration, which can scarcely be initiated or established without producing in the respiratory organs certain indelible changes, on which the different forms of the *docimasia pulmonaris* are based.

In order to determine whether a child has been born living, we look for the necessary proofs in the colour, volume, consistency, and external aspect of the lungs, in their absolute weight, and the quantity of blood contained in the pulmonary vessels; but for the most certain proof, the medical jurist relies upon the results of the application of the hydrostatic test.

The method of applying this test, the principles on which it is based, and the cautions required for avoiding erroneous inferences from its employment, are so generally known that any detailed description is here unnecessary.

As a result of the act of breathing, it is well known that the lungs of a child become lighter than water, and that they float on it either wholly or partially, according to whether the respiration has been complete or partial. All the authorities on legal medicine agree in the following propositions: 1. That the floating does not necessarily prove that the lungs have breathed; and 2. That the fact of their sinking in water does not indicate in all cases that the child has been born dead.

The floating of the lungs of a child which has not breathed may be due—1, to artificial inflation; 2, to putrefaction; 3, to emphysema; 4, to congelation; 5, to their having been preserved some time in alcohol.

On the other hand, the sinking of the lungs which have breathed may depend—1, on a general sanguineous congestion of the pulmonary vessels; 2, on hepatisation or tuberculous or other deposits in the lungs; 3, on advanced putrefaction, with destruction of the air-cells; 4, on the act of boiling, or any cause which increases the density of the texture of the lungs.

These, so far as the author is aware, are the only possible conditions which, according to medico-legal authorities, can give rise to the floating or sinking of the lungs independently of the act of breathing.

Professor Giovanardi has discovered another cause of the complete submersion of the lungs in water in cases in which respiration has been performed, and he has suggested a method by which this cause may be recognised, and an opinion given on the question whether the child was or was not born living.

With the view of demonstrating to the students

of his class of legal medicine the method of applying the hydrostatic test on these occasions, Dr. Giovanardi removed the lungs from the chest of a child eight days old. The organs were not inflamed or congested; they crepitated on pressure, and readily floated on water. After two days' immersion, it was observed that they had partially sunk. Their buoyancy decreased daily, and after the lapse of thirteen days they were lying at the bottom of the vessel. In a second experiment, the lungs of a child which had lived five hours were found to be fully distended with air from breathing. When placed on water they floated, but after remaining in water eleven days they had spontaneously sunk to the bottom of the vessel. In a third case, of a child of five days, the lungs placed on water sank to the bottom in nine days. In a fourth case, in which the child had lived thirteen days, they were found at the bottom of the vessel in fourteen days. In the fifth case, the new-born child had lived twenty hours, and had fully breathed. The lungs were removed from the chest, and the right lung was separated from the left. The right, placed in water in an entire state, floated; the left, divided into three portions, also floated. In eight days two of these portions had sunk to the bottom, while the right lung only sank after eleven days.

The lungs which had thus spontaneously sunk in water presented the following characters: increase of volume and of absolute weight, loss of crepitation, and a pale bluish colour.

Other experiments were performed on the entire dead body. 1. The body of a child which had lived seven days was immersed in water and left there for twenty days. It was then removed, and the lungs were taken from the chest and examined. They were reddish coloured, crepitant, and soft, and floated when placed in water. 2. In the case of another child, which had lived three days, the body was not submerged until after the cavity of the chest had been opened, and the water allowed free access to the lungs. After twenty days the lungs were found to have become pale, heavy, and increased in bulk. Placed on water, they sank to the bottom of the vessel. They were removed, and submitted to pressure. A large quantity of liquid was thereby forced out of them. They immediately sank when placed on water. These lungs were removed and dried in the sun, a process which occupied a period of three days. Placed on water, they again floated.

Lungs taken from another subject were dried by a strong fire until almost carbonised. They underwent a great reduction in volume. While drying, water gradually escaped from them, and when subsequently tested they floated on water.

For the sake of comparison, the lungs of a child born dead were placed on water, and they immediately sank. They were removed and examined, after fifteen days' immersion. Their volume and weight had but slightly increased. The interlobular grooves were scarcely perceptible. When the lungs were placed on water, they sank; when removed and dried, either by a fire or in the sun, and again placed on water, they sank to the bottom of the vessel.

As a result of boiling portions of lungs which had breathed, it was found that on contact with water they rapidly sank.

The conclusions drawn from these experiments by Professor Giovanardi are as follows.

1. The lungs of a child which has breathed sink in water, if allowed to remain eleven or twelve days immersed in that liquid.

2. When the entire body of a child which has

\* *Rivista Sperimentale di Medicina Legale*. 1877. Fascicolo iii, c. 4.



breathed is placed in water, the chest being closed, the lungs will continue to float up to their entire destruction by putrefaction. When the cavity of the chest is opened so that the water may have free access to the lungs, the lungs will sink after fifteen or twenty days' immersion of the body.

3. In cases in which the body of a new-born child is found cut to pieces, the chest opened, and the lungs exposed (to the action of water?), an expert must not infer that the child has not breathed because the lungs sink in water.

4. By drying the lungs, an expert may determine whether the sinking in water is owing to their not having breathed. If they have breathed, and have been several days immersed in water, they will, after drying, float, while if they have not breathed they will in the dried state again sink.

5. In reference to this condition, an expert may sometimes form an approximate judgment of the time which has elapsed since the death of the new-born child. Thus spontaneous submersion takes place in from eleven to fifteen days, and some days earlier if the breathing has been imperfectly performed, or if the lungs are cut in pieces or are in a putrefied state.

[We learn from these researches of Professor Giovanardi, that the lungs of children which have lived and breathed for some hours or days, when allowed to remain in water so that the liquid is in direct contact with them, gradually lose the greater part of the air, imbibe water, and sink. A long immersion is required for this result, and in the case of a dead body no change is observable unless the chest is laid open. This disposes of one possible objection to medical evidence in cases of infanticide by drowning, or where the body is found after some days or weeks floating in water. If the child have really breathed, the lungs retain their characters, as in cases of non-immersion. If the chest have been cut open at the time of immersion, the water will penetrate, and may by its pressure expel air from the lungs. In this case, the lungs of a child which has lived and breathed may sink in water; and an expert who relied on the sinking may infer that the child was born dead, and that no murder has been perpetrated.]

Giovanardi's experiments go beyond this. He tells us in his third and fourth conclusions that sinking lungs, artificially dried, will in this state float if a child have really breathed, but if there have been no breathing they will sink. The drying will not give them buoyancy.

These conclusions can have no application to the numerous cases of child-murder in which the bodies are either not found in water, or, being so found, the chest is entire, since direct contact of water with the lungs is absolutely necessary to remove the air received by respiration.

An expert, therefore, relying upon the results of these experiments, could fall into the error of pronouncing a living child to have been still-born only when, in a case of drowning or any other form of child-murder, the chest had been cut open and the lungs exposed before submersion of the body, a very improbable condition to encounter in practice.

This new sign of respiration can have in any case but a very restricted application. Thus, in an ordinary case, after the employment of the hydrostatic test, it would be necessary to leave the floating lungs in water for a week or longer, and to observe whether they sink, to remove them, to dry them, and again place them in water. If they float when dry, this, we are told, will indicate breathing and extra-uterine

life. If they sink after drying, just as when they were placed in water in the recent state, this will indicate still-birth.

We doubt the correctness of this conclusion from the floating of the dried lungs, and should require some further experiments on lungs that have breathed, before adopting it. Before it can be received as an aid to medical evidence, it must be shown whether lungs which have imperfectly breathed or have undergone artificial inflation equally float after spontaneously sinking and subsequent desiccation. It should be stated that Professor Giovanardi has published his paper in the *Rivista* only as a preliminary communication. He intends to follow up the subject by a series of experiments on the lungs of adults and of the lower animals.—*Rep.*]

A. S. TAYLOR, M.D.

## LASÈGUE AND FALRET ON THE CONTAGION OF INSANITY.

DRS. CH. LASÈGUE and J. FALRET (*Annales Médico-Psychologiques*, Nov. 1877) make a combined attempt to establish the theory that certain forms of insanity are contagious.

The cases brought forward in proof of this fact are somewhat similar, three of them (Observations ii, iii, and iv) being instances of insanity being conveyed from an insane mother to an hysterical daughter, strongly predisposed to mental disorder; one (Obs. i), where two old maids imparted the malady to an adopted orphan; another (Obs. v), in which two other old maids gave it one to the other; and, finally, two more cases (Obs. vi and vii), where two widows succeeded in inoculating with similar hallucinations two ladies separated from their husbands.

[The reporter, on a previous occasion, stated his opinion that such cases might usually be looked upon as instances of imitation, which are common enough in all asylums, but denied the possibility of an insane person being able to cause mental disorder in a person of sound mind, unless such person were acted upon by other influences, such as hereditary taint or by some other nervous predisposition. Granted the facts that two twins, for example, inheriting the same physical and mental peculiarities, and influenced by the same education and surroundings, may go mad coincidentally, the reporter still holds to his former conviction that neither insanity itself nor any form of it can be transmitted from an insane patient to one of healthy mind. When both persons have passed the boundary line, and are beyond doubt insane, if such persons be thrown together, then *imitation* is perfectly possible, but this is altogether a different matter from *contagion*, as where the bite of a dog may cause in another hydrophobia.—*Rep.*]

The following conclusions are arrived at by Drs. Lasègue and Falret, which partly coincide with the opinions expressed above.

1. Under ordinary circumstances, contagion of insanity does not take place between a mad person and one of healthy mind, and at the same time contagion of delusions between one insane person and another is very rare.

2. Contagion of madness is only possible under the exceptional conditions which are noted under the name of "*folie à deux*."

3. These special conditions may be summed up thus: *a.* In "*folie à deux*," one of the individuals is

the active element; being more intelligent than the other, he creates the delusion, and grafts it by degrees on the second, who constitutes the passive element. This one resists at first, but gradually yields to the pressure of his colleague; but, reacting in his turn upon him, in order to a certain extent to rectify, amend, and co-ordinate the delusion, it becomes common property, and they repeat it to every new comer in the same words, and almost in the same manner. *b.* In order that this intellectual operation may be carried on simultaneously in two different minds, it is necessary that the two individuals should live for a long time an absolutely similar life, amongst the same surroundings, partaking of the same mode of existence, the same thoughts, the same interests, the same fears, the same hopes, and be free from any other external influence. *c.* The third condition in order that contagion of delusion may be possible is, that the delusion should be of a reasonable description; that it should fall within the bounds of possibility; that it should rest upon past events which have actually occurred, or upon fears or hopes conceived for the future. This condition of reality alone renders delusion communicable from one individual to another, and permits the conviction of the one to be implanted in the mind of the other.

4. *Folie à deux* is always manifested under the conditions above indicated. All the cases present very analogous characters, if not almost identical, in the man, the woman, the child, the adult, and the old person.

5. This form of insanity is more frequent amongst women, but is occasionally observed amongst men.

6. One can allege, as an element in its production, heredity as a predisposing cause, when it affects two persons belonging to the same family, two sisters, the brother and sister, the aunt and the niece, etc. But this cause cannot be alleged in cases where no bond of relationship exists between the two patients, as, for example, when the disease affects a husband and wife.

7. The indication for treatment consists in separating the two patients from one another. It then sometimes happens that one of the two recovers, especially the second, when he is deprived of the support (*point d'appui*) of a friend to whom he may communicate his delusion.

8. In most cases, the second patient is less powerfully attacked than the first. He may sometimes be considered as having yielded to a transient moral impression, and as not being insane, in the social and legal sense of the term. There is no need to incarcerate him, although his colleague is placed under restraint.

9. In some rare cases, the moral impression made by an insane person upon another individual more feeble than himself, may extend to a third person, or even, in a more feeble degree to several persons in his neighbourhood. But it is then almost always sufficient to separate the insane person from the circle he has influenced to different degrees, for them to gradually abandon the false ideas which have been communicated to them.

H. SUTHERLAND, M.D.

## BINET ON HÆMORRHAGES IN HYSTERO-CATALEPSY.\*

CATALEPSY, more than any other disease, seems to possess the power of astonishing. Regarded formerly as a supernatural manifestation, it still presents phenomena which science is unable to explain; and this is so, not on account of the symptoms being departures from the laws of nature, but is rather due to the incompleteness of our knowledge. For this reason, any contribution tending to clear up a single point is of value. Hæmorrhages in catalepsy, ecstasy, etc., are extremely rare, but are mentioned by four authors. When they appear to represent acts of religious tradition, they are regarded by the vulgar as undeniable miracles. The case of Louise Lateau, the mystic of Bois d'Haine, is one of many examples. The clergy have seen in this case a miracle. The *savans* are divided into two rival camps; one party is of the same opinion as the priests, the other repels that view, declaring, with M. Virchow, that there has been deception. The former, with M. Warlomont, while believing in the good faith of the patient, seek to give an interpretation based upon physiology, and the sane reason. The hypothesis of M. Warlomont is attractive, and seems to approach the truth. The following observation, it is hoped, will help him, and at the same time be a contribution to the study of hæmorrhages in hystero-catalepsy. The report will be fuller and more complete than that of Louise Lateau. In this last there was hæmorrhage through the skin; in Philomel L. by the mucous membranes; and this is the point of contact which it is desirable to keep in view.

Philomel L., female, single, aged 36, was admitted into the Asylum of the Charité-sur-Loire, 21st August 1876. Her certificates were of an unfavourable character. She was stated to be of drunken habits, and to have led a dissolute and vagabond life. Not much was known of her previous history. Several times she had been in the hospital at Nevers; probably after cataleptic attacks, but no notes of her case existed. The attacks were stated to last twenty-four hours, during which she was said to cry, fall down, and to foam and struggle in severe convulsions. Since her admission to the Asylum she presented similar attacks of convulsions. It was said that during her last residence in the hospital at Nevers she fell into an uninterrupted sleep of fifteen days' duration. There was anæsthesia at the time, but no hæmorrhage. She acknowledged to having led a dissolute life after her recovery, and to having wandered over the greatest part of France, earning her living in various ways, and never staying more than three or four months in one place. This wandering life did not commence until she was 25 years of age, up to which time she had lived with her family in the country. At that time she had an attack of hysteria following opposition to the will, but she did not lose consciousness. Since then she had often had similar attacks following passion. She confessed to being of very irritable character, crying and laughing easily. She also remembered falling into a long sleep when last in the hospital, and said that she had complete loss of consciousness.

On her admission, the Medical Director diagnosed a case of hysteria in a person of *nervo-sanguin* temperament, stupified by excesses of all kinds, and particularly by strong drink, which had not, however, caused delirium. Shortly afterwards, she was noted



to be of a very irritable and argumentative disposition, seeking to quarrel, and striking without notice. No change was noted in her condition up to the end of 1876.

*First Attack.* January 13, 1877.—About four o'clock in the afternoon (following upon an attack of violence for which the camisole had to be used), the patient fell into a profound sleep, which no excitement could disturb. The levators of the inferior maxilla and the posterior muscles of the neck were very contracted, the remainder of the muscular system being quite relaxed. There was constipation, and the urine had been discharged involuntarily.

January 16 (fourth day). The depression being considerable, it was resolved to feed the patient by means of the œsophageal sound introduced through the nose. Hardly had the sound reached the entrance to the pharynx, than in spite of all precaution a copious discharge of blood occurred from the nose, and did not stop for several hours. The patient did not awake.

January 17 (fifth day). The same symptoms were present. There was still loss of blood from the nose.

January 18. The mouth was opened, difficulty being encountered in overcoming the trismus. A spoonful of cold soup introduced into the mouth brought on violent cough, and was rejected. There was contraction of the œsophagus and pharynx, preventing food from entering the stomach. Hæmorrhage occurred from the mouth; it was not abundant and was arrested spontaneously.

January 11 (ninth day). The patient was submitted to a strong electric current, which soon awakened her. She was made to swallow a little broth, when she again fell into a similar state of sleep to that from which she had awakened.

January 22. When the electric apparatus was being made ready, the patient seemed to be conscious of it, and a very slight current served to awaken her. On awaking, she complained of languor in the head and of fatigue. She took some food; and at the end of several days was in her usual health.

This awakening at the mere sound of the electric instrument made one think that the sleep was simulated; but it might be explained otherwise, viz., that the sleep was not complete, that all the intellectual faculties were not closed. But the sleep in this attack could not have been very profound, for she drank without opening her eyes, or, if she asked for drink, she was not able to avail herself of it when it was presented. Towards evening each day, still with closed eyes, she would talk, speak, gesticulate, try to overcome obstacles, etc. If placed in an easy position on her side, she sought to assume the dorsal and horizontal decubitus. During the whole duration of the attack the pulse was less frequent in the morning than in the evening, varying from 90 to 100. The heat of skin remained the same, judging by the touch, but the lower extremities were cold, in spite of a hot bottle. The hæmorrhage could not possibly have been due to the sound, because, after it had ceased, it reappeared on other days when the sound was not used, and when no adequate cause was present.

*Second Attack.*—Towards the end of February she was found one morning asleep in bed, and no efforts could rouse her. Removal to another room for the purpose of more closely watching her, did not awaken her. Her face was congested. In the evening the sleep continued, and her feet were placed in mustard and water, which had the effect of awaken-

ing her. The attack ended, but not the hæmorrhages. There was no coincidence with the menstrual period. During March and April the patient worked a little, and seemed generally quiet. She had no hallucinations and no epilepsy.

*Third Attack.*—In the morning of May 14th an attack commenced. M. Binet was present. An attack of passion determined the sleep. The muscles of the neck were rigid and hard as were the elevators of the lower jaw; those of the trunk and limbs were relaxed, submitting without resistance to change of position. The eyelids were closed, but moved occasionally; the pupils were dilated, but active; the conjunctivæ were sensitive, and not congested; general sensibility of the body was lost. No reflex movements were excited on pricking or pinching the skin; the heart beat regularly but rapidly; respirations were proportioned to the pulse. At 2 p.m. the pulse was 108; temperature, 37.6° c. (99.7 Fahr.). There was no hæmorrhage. No urine was passed. The menstrual flux had ceased four days previously.

May 15 (second day). Pulse, 124; temperature, 38.3 c. (100.9 Fahr.) Evening, pulse, 76; temperature, 36.4 c. (97.5 Fahr.). There was abundant epistaxis; no other change.

May 16th (third day). Morning pulse, 136; temperature, 38.3 c. (100.9 Fahr.) Evening pulse, 82; temperature, 37.3 c. (99.1 Fahr.). She had bleeding from the mouth and nose. The blood was very red, and that from the mouth frothy. Falling back into the pharynx, it provoked attacks of coughing and suffocation. When turned on her side she resisted, and resumed the dorsal decubitus.

May 17. Morning pulse, 142; temperature, 38.6 c. (101.5 Fahr.) Evening pulse, 96; temperature, 37.6 c. (99.7 Fahr.) There was no bleeding from the mouth, but some from the nose.

May 18. In the afternoon she asked for a drink, but could not make use of it, and did not awaken. Bleeding still continued from the mouth and nose, and was supplemented by a bleeding from the vaginal walls, which could not be accounted for as menstrual, seeing that the regular discharge ceased eight days previously. This concomitant hæmorrhage from the nasal, pharyngeal, vaginal, and perhaps pulmonary mucous membranes, is an important feature, and it is possible that other mucous membranes also exuded blood.

May 19. The extremities were cold, only the trismus was still persistent. The patient awoke and immediately recovered consciousness; she asked for a drink, but could not eat. Bleeding still continued from the vagina.

May 20. She had nausea, and during the day black changed blood was vomited, which had evidently remained in the stomach. It seems more than probable that the blood came from the mucous membrane of the stomach as a sanguineous exudation. For the blood from the pharynx was always rejected from the mouth, and there was always œsophageal contraction, preventing deglutition. The patient was drowsy, replying to questions slowly. There was a slight flow of blood from the vagina. Constipation persisted. She did not take food.

May 21. She had fallen into much the same state of catalepsy, with hæmorrhages. She spoke in her dreams, and it was always to the same people as she spoke in former attacks, her dreams seeming to the bystander to be identical in each attack. She answered questions on the subject of her dreams, but to others remained silent. The œsophageal sound would not pass, being arrested by the contraction of

the pharynx and muscles of the neck. In the evening she awoke, and food was placed in her mouth through the spaces left by absent teeth, the trismus still persisting; this food was rejected, the pharynx being closed. A current of electricity caused this obstruction to disappear, and relaxed the jaw so that she could swallow.

May 22. She was taking food well. There was slight bleeding from the vagina. She slept soundly. It is worthy of remark that, in spite of the cataleptic sleep, normal physiological sleep seemed to be necessary to the patient, for she would sleep long and soundly. On examining the mucous membrane of the pharynx, it was found to be very dark. General sensation seemed lessened; she appeared to judge by reflex action.

May 23. She was weak and languid, and kept her bed. There was some spitting of blood, at which she was alarmed. Constipation persisted. She was ordered purgatives and nourishing diet.

May 28. After repeated doses of oil and salts, the bowels were opened. The stools, at first yellow, became black and fetid, consisting of changed blood, possibly exuded from the intestinal mucous surface. Her return to health was rapid.

This case cannot be regarded as one of simple catalepsy. The limbs did not remain in any position in which they were placed, and were not rigid; but one cannot attribute the attack to any other disease. The muscular powers were in abeyance in both the voluntary and the involuntary systems. The respiratory muscles acted softly, and, as it were, reluctantly; the heart's action was feeble, the pulse being always small and the extremities cold.

The sleep lasted seven days, in portions of 22 hours. In the last attack, when the hæmorrhage from the vagina commenced, and that from the mouth and nose were in full flow, the temperature rose to 38.6 cent. (101.48° Fahr.), and the pulse was at the same time 142. This was the maximum rate of both. The temperature was highest in the morning, and gradually fell through the day. When the relapse occurred, the temperature again rose in the morning and fell towards evening. The pulse-curve always followed the temperature. A similar attack occurred in June, and the curves of pulse, temperature, and respiration, were found to coincide, and to attain their maximum height on the day when the hæmorrhages appeared.

This case seems to offer facts tending to facilitate a scientific explanation of the phenomena of hæmorrhagic stigmata. It may be objected that this patient is not an ecstatic, and that therefore she may not be compared with Louise Lateau or to any other mystic. The history of ecstasy and catalepsy is not, however, complete. A certain obscurity obtains in these nervous states, but they have numerous points of contact. Perhaps they are different forms of the same disease, and it may be that ecstasy is catalepsy of a kind peculiar to the contemplative life. That hæmorrhages may occur without artificial cause in the cataleptic sleep is proved, and from the one hæmorrhage to another the distance is not great, being mainly constituted by the difference of seat. The difference of seat is what separates the hæmorrhages in the case of P. L., from those of Louise Lateau. Believing with M. Warlomont that the hæmorrhages are due in Louise Lateau to the influence of the moral nature upon the physical, let us review the *morale* of these two patients.

The first, Louise Lateau, is a fervent Catholic, elevated by ideas of asceticism, living in the prac-

tices of the *culte* which ends in absorbing all her thoughts. She has lived in a remote village all her life, in the ceaseless cultivation of religious ideas, and is regarded as a saint. Ecstasy is her habitual state; she is full of ideas of poverty, charity, and sacerdotalism. She saw the Blessed Virgin and Sainte Thérèse, and once assisted at a Drama of Golgotha.

Philomel L., on the contrary, has had no religious ideas or practices; her intelligence is obtuse, and quite fully occupied with the wants of the vegetative life. Her wandering, drunken, licentious life did not tend to elevated thoughts. In her dreams she saw no saints, her ideas seeming to consist of nothing but confused memories.

Thus, in the state of ecstatic or cataleptic sleep, the moral nature shows itself but as a reflex of its normal state. From the one we might predict the other.

With regard to the hæmorrhages, one would have been much more surprised to have found them as stigmata in Philomel L., than in Louise Lateau. The simple explanation would seem to be that the blood escaped at the point of least resistance, which in Philomel L. were the mucous membranes. In Louise Lateau, who had constantly her eyes and her whole being fixed in continuous contemplation of the sufferings of the Passion, and who probably wished to suffer in the same manner, was it not natural that the hæmorrhages should take the form of stigmata. An argument against the divine intervention is found in the last hæmorrhagic point, viz., the scapular, which is out of place as a repetition of the wounds of Christ.

This exudation of blood is not rare, but as a rule it exists in portions of the body where there are a large number of sudoriparous glands, as the armpit, the tips of the fingers and toes, and on old cicatrices. The skin which has been the seat of pemphigus or eczema, and in places where blisters have been applied, becomes more vascular, and favours the exudation of blood.

This sweating of blood has generally followed some great nervous perturbation, and has sometimes been vicarious of menstruation. In Louise Lateau, the commencement of the hæmorrhages and ecstatic attacks dated from the establishment of the menses, which were first replaced by hæmoptysis, afterwards by the stigmata. If it be objected that these ecstasies have not a simple exudation of pure blood, but blisters which give out blood and serosity, it may be said that such cases are not unique. The author has lately had the opportunity of seeing a case under the care of Dr. Collin, Inspector of the Mineral Waters of St. Honoré, in which a cachectic woman presented on the skin several small blisters, which discharged blood and serosity, and then healed up, others appearing in fresh places. Now, although this fact is rare, it is one fact more added to our knowledge; and although we cannot explain it on scientific grounds, we do not dream of introducing mystery into the matter, and yet it has points of contact with the stigmata. There seems every reason for regarding these three cases as belonging to the same pathological series, the gaps between which, it is probable, will one day be filled up by other examples. The case of Louise Lateau will always be regarded with curiosity, but must cease to be regarded as supernatural, when accumulated facts enable science to shed light upon these obscure affections of that proteus, the nervous system.

CHARLES ALDRIDGE, M.D.



# SOKOLOWSKI AND GRÉIFF ON THE PRESENCE OF ELASTIC FIBRES IN PHTHISICAL EXPECTORATION.

THIS paper has appeared in the *Deutsche Med. Wochenschrift*, February 9, 16, and 23, 1878. The authors say that in many cases of phthisis, when the physical signs do not afford satisfactory evidence of destruction of lung-tissue, the demonstration of elastic fibres in the sputa becomes of great diagnostic and prognostic importance. The authors have made very numerous observations to determine how far the presence of elastic fibres in the sputa corresponds to the data of physical examination, in respect to the destruction of the pulmonary tissue. With this object they have followed the cases of 70 patients; the examinations for the fibres have been made by two methods, fresh and by Fenwick's process slightly modified, the latter being generally adopted.

They mixed the whole of the sputa with a soda solution (1 of liquor soda to 2 of distilled water) and boiled it for four or five minutes; then diluted it with an equal quantity of distilled water, poured it into a flat porcelain vessel, and fished out the particles suspended in the water, and subjected them to microscopic examination. In some cases they only found one single piece, in others many dozen; in the cases where so many were present, the physical examination also showed signs of great destruction of the lung, but in general no very great importance is to be attached to the number of the pieces. Their size varies as much as their number; in one case of gangrene of the lung the large pieces were more than a millimètre long, but in general they were only a few fractions of a millimètre. In colour, the boiled fibres were yellowish brown, or dark brown and blackish. Generally the fibres assumed the structure of a reticulum, but very rarely as well marked as Fenwick figures it; the colour is so distinct that artificial staining, as suggested by some (by fuchsin, as recommended by Duval), is unnecessary. There are frequently fungous growths in sputa which at first might be confounded with the fibres, but the greater thickness and regularity of the latter indicate their nature. (The authors here print a tabulated account of all their cases.)

Of the 70 patients who were examined, 19 belonged to the stage of breaking down of the lung with marked hectic: of these 19 cases they found elastic fibres in 18; in two they found them only at the second or third attempt, although the physical signs of destruction were present. The single case, in which in spite of two examinations they failed to find any fibres, was a female patient, aged 20, with great destruction of the left upper lobe and marked hectic; further investigations were made impossible by the departure of the patient. In another of the patients of this group they found the fibres once only in several examinations. In one case the absence of the fibres corresponded to temporary improvement and freedom from fever; in another they found no fibres at their second examination, although no improvement, but an increase of the hectic, existed. From their cases they conclude that, in cases of phthisis with demonstrable breaking down and decided hectic, fibres will be found, if not in one, at least after several examinations; but that in these cases the discovery is of no value, as the destruction of the lung-tissue is otherwise sufficiently proved.

Of eleven cases belonging to the category of chronic phthisis with unmistakable destruction of lung-

tissue, but without hectic, elastic fibres were found in all, but in one of these they were only found at the second or third examination, at a time when temporary fever and a relapse existed. Here also their discovery was of no diagnostic value. But may it be of prognostic value, as the case just referred to might indicate? In another case, in spite of general and local improvement (disappearance of the physical signs of a cavity), elastic fibres were found up to the time of his discharge, which served to show that, in spite of the apparent improvement, the destructive processes in the lungs were still going on.

In the other forty cases there were signs only of consolidation; the condition of all was good, and without fever, with two exceptions. In the first case, after a violent attack of pulmonary hæmorrhage, diffuse pneumonia with high fever supervened, which terminated in death. In the second case, a feverish condition developed from time to time, which generally accompanied hæmoptysis. Of these 40 patients 16 had great consolidation of one or both lungs; of these 16 they found elastic fibres in 12 cases, in four cases they found none. Of these four cases two had great consolidation of the right lower lobe, in the other two the consolidation was of very old date, and probably was already contracted. Of the 12 cases in which fibres were found, in one case they were discovered first at the second, in another not until the sixth examination; in the last patient their appearance was preceded by several days' fever and dyspnoea, probably indicating a commencing destruction of the infiltrated parts. In 75 per cent. therefore of their cases of consolidation, they found these fibres present, which, they say, shows how frequently destruction is going on although the physical signs are those of consolidation only. In such cases, the prognosis must be always made with caution. The remaining 24 patients had only very slight consolidation in one or both apices; in eight cases, or one-third of the whole number, the elastic fibres were found, in the other two-thirds there were none. Of these eight cases some are worth recording briefly.

CASE I. Frau H., aged 30, with hereditary predisposition, said her illness began six months ago with a cough. There never had been any fever; from time to time she had hæmoptysis. Her general condition was good. There were very limited dulness in the right supraclavicular fossa, prolonged expiration, and scanty *râles*; cough was very little, only in the morning. The expectoration was slight, whitish, without any clumps; microscopic examination showed pus and mucus cells. Fenwick's method demonstrated elastic fibres. After three weeks she was better; the *râles* had disappeared; the cough and expectoration were less, in the latter there were still elastic fibres. After five weeks more, there was still more improvement; there was quite slight dulness with loud expiration; cough and expectoration were little marked. In the latter, in spite of careful examinations, no elastic fibres could be found.

CASE II. Herr H., aged 18, with hereditary predisposition, said he had had a dry cough for two months. He had become very thin, feeble, and short of breath. Evening temperature, 38.5° cent. (101.3° Fahr.). There was slight dulness at the right apex, and scanty dry *râles*; his cough was violent, with slight sputa containing a moderate number of fibres. The diagnosis was, commencing destruction of the infiltrated parts of the lung, with an unfavourable prognosis. The course of the case was persistent

fever, occasional hæmoptysis and once pneumorrhagia, while the physical signs of destruction were still more decidedly present.

CASE III. Herr W., aged 26, in good general health, was free from fever, but with slight dullness at the right apex, prolonged expiration, and scanty dry *râles*. For some weeks he had suffered from a daily, though not inconsiderable, hæmoptysis. The sputa showed no elastic fibres at the first examination, but the second time, three weeks later, a very decided reticulum was found. The general condition of the patient had improved, but the hæmoptysis had persisted. Apparently there was in this case a deeply situated patch of destruction from which the expectorated blood came. The patient withdrew himself from further observation.

Of the eight cases in which the fibres were found, in five they disappeared after more or less time, which coincided with a gradual improvement. Of the other three cases, in one the local lesion maintained the *status quo*, in the other two it made rapid progress.

From these facts, it appears that the demonstration of elastic fibres is of the greatest diagnostic and prognostic importance in cases of badly marked infiltration of the pulmonary parenchyma. The author's conclusions are thus summed up.

1. The examination of the sputa in phthisis should not be neglected.

2. A single examination for elastic fibres, especially for negative purposes, is not sufficient.

3. In physically demonstrable pulmonary destruction, the presence of elastic fibres in the sputa may generally be expected, but it is of little value for diagnosis or prognosis.

4. In those cases which present physical signs of only more or less consolidation of the lung-tissue, the finding or not finding of elastic fibres is of great importance for diagnosis and prognosis.

ROBERT SAUNDY, M.D.

### FÜRSTNER ON THE TREATMENT OF ALCOHOLISM.\*

THE fact that more than 400 patients suffering from delirium tremens were admitted during one year into the Vienna Charité, is only an example of the increasing evil which is caused, especially in large cities, by the immoderate consumption of alcohol. The increase in the number of cases of insanity which may be ascribed to this cause has attracted the serious attention of physicians and others in most civilised countries; the establishment of special institutions for the detention and treatment of persons suffering from the various forms of alcoholism has been advocated by many as a means of combating the growing evil. In the present paper, Dr. Fürstner directs attention to some points in the treatment of the more acute forms of disease due to alcohol, and concerning which it is desirable that greater unanimity should prevail than is at present the case; he also points out certain social causes which prevent the therapeutic results in many cases from being as favorable as could be wished.

Excluding the cases of insanity in the narrower sense of the word, due to alcoholism, the remaining forms of alcoholic disease may be divided into three groups, viz. — 1. Delirium tremens; 2. Chronic alco-

holism; and 3. Either the latter, or delirium complicated with epilepsy.

First, as regards delirium tremens patients. Owing to their restlessness, etc., it is almost impossible to place them in a large ward or associated dormitory. Three alternatives remain, the use of mechanical restraint, isolation, or a high degree of narcotism. There are many objections to the first method. The patient can seldom be secured without a sharp struggle with his attendants; and experience teaches that excitement is increased in these patients by mechanical restraint even in a greater degree than in true insanity. Alcoholism strongly predisposes to various lung-diseases and disturbances of the circulation; nothing would more greatly favour the commencement of pneumonia, etc., than a forced and prolonged horizontal position of the body, which must lessen the power of expansion of the chest; it must also be remembered that these patients are subject at any time to sudden disturbance of respiration by an epileptic attack. The non-restraint system should surely be easier to carry out with patients whose excitement lasts only a few days, than among chronic lunatics. The isolation of the patient is greatly to be preferred; it will seldom be needed for more than one or two nights, or a few hours during the day; with experienced attendants, the patient may be dressed and taken to and from his single room, without any considerable degree of resistance. On being secluded the patient's excitement is at first considerably increased, but after a time he usually settles down to some imaginary occupation (generally connected with his trade); the continuous movements cause copious sweating, and thus favour the elimination of alcohol from the system; towards morning the patients mostly lie down on the bed exhausted, and remain quiet. Owing to the tendency to excessive perspiration, the temperature of the single room should be carefully regulated; and, as these patients occasionally undress themselves or tear their clothes, the latter should be made of strong material, and so fastened that they cannot be easily undone; they should, however, in no way limit the movements of the patient. Though attempts at suicide in these cases are comparatively rare, precautions should be taken against them, and the single rooms used should be padded. The possibility of the patient turning on his face in an epileptic fit and being suffocated in the bed can hardly contraindicate seclusion, as the same accident may happen in a large ward; of course the patient should be frequently visited. The writer quite disagrees with Rose in thinking that the quiet, loneliness, and darkness of a single room favour the production of hallucinations. He has observed, on the contrary, that the personalities and occurrences in a large ward are much more prone to give rise to excitement, delirium, and hallucinations. In the morning the patient should have a warm bath, and then be tried in the general ward; the temperature should be regularly taken morning and evening, as any increase in it gives the first intimation of any commencing complication. Occasional sudden attempts at escape through the window, not at all uncommon among patients delirious from fever or alcoholism, must be guarded against by suitable precautions. Not unfrequently sleep comes on spontaneously during the remission usual in the day time; if not, it may be induced by narcotics.

The author has little experience in the use of opium and morphia, but gives the results of his observations on the action of chloral. The expectation that was formed when this drug first came into

\* *Allgemeine Zeitschrift für Psychiatrie*, Band 34, Heft 2.



use that we possessed in it an infallible remedy, has not been fully realised ; but these high expectations were from the first unfounded, for in the first published cases of delirium tremens treated by chloral its favourable action was not always very marked ; sometimes its effect was temporary, sometimes altogether absent ; in some of the cases toxic symptoms were caused, and it soon became evident that the dose necessary to produce the desired result varied within very wide limits. It must never be forgotten that many patients, when they first come under treatment, have still a large quantity of uneliminated alcohol in the system. Though the general symptoms of depression caused by large doses of alcohol are often not very marked in habitual toppers, still the condition of the pulse deserves the most careful consideration in deciding the dose of chloral to be given. Certain patients, not necessarily weak and emaciated, but apparently robust, muscular persons, often have a remarkably small, frequent, compressible, occasionally irregular pulse, with great faintness of the heart-sounds, and a less degree of motor restlessness than usual. The author has repeatedly satisfied himself by necropsies that these symptoms are not due to any disease of the heart ; they must therefore have a central cause. Having regard to the facts that chloral has been proved experimentally to have, in large doses, a paralyzing action on the heart and vaso-motor centre, and that several published cases show that chloral has had a pernicious effect in alcoholism, it is necessary to be most careful in the administration of alcohol in the cases just described. The author believes that cases of sudden death in delirium tremens after the administration of chloral, are to be explained by the combined cumulative action of alcohol and chloral upon the vital centre in the medulla. It may be urged against this theory that sudden death is by no means uncommon in this disease, even when no chloral has been given ; Dr. Fürstner believes that in these cases the alcohol has of itself been sufficient to stay the functional activity of the vital centres ; it is, therefore, most important not to increase this danger when it threatens by administering chloral. All patients who, though apparently robust, have the small, frequent, and compressible pulse described above, without other complication, are treated by Fürstner without chloral ; they are secluded if they cannot be kept in a general ward, and small doses of wine and spirits are given with good results.

Closely related to the above is another group of cases, named by Magnan *delirium tremens febrile*. The writer has notes of five such cases. They are characterised by the temperature rising within two or three days up to or above 41° cent. (nearly 106° Fahr.), without the presence of any other complication ; the tremor is generally intense in the tongue and extremities, short fibrillar twitchings gradually spread throughout the muscular system, and at last a rapidly fatal collapse sets in. In one of the author's cases the temperature in the rectum reached over 100° in the death-agony. The frequency of the pulse by no means always corresponds to the rapid rise in the temperature, nor do the motor restlessness and activity of the delirium exceed in any degree what is usual in ordinary cases. Among Magnan's seven cases, three had epileptic attacks during the course of the disease ; of the writer's five cases two had repeated fits, while two others exhibited at irregular intervals the following symptoms, nystagmus-like movements of the eyes, short twitchings of the

facial muscles of one side, masticatory movements, flexion of one or other extremity, and, more rarely, inclination of the head and eyes towards one side. These appearances are to be seen at the commencement of a typical epileptic fit, and still oftener in an abortive fit. In all five cases, albuminuria came on. This triad of symptoms (viz., strong evidences of motor irritation leading sometimes to convulsions, albuminuria, and rapid rise of temperature), considered together with the absolutely negative result of the necropsies in all the author's cases, leads him to think that a certain region of the brain, in which we know by experiment that the centres from which the above symptoms are produced are situated near one another, has been specially influenced by alcohol. [Might not the albuminuria be due solely to the pyrexia? No reasons are given to the contrary.—*Rep.*]

The large majority of these cases occurs in patients who have been in the habit of using the strongest forms of alcoholic drinks, e.g., "Absinthe", "Schnaps", "Nordhäuser", etc. Dr. Fürstner deprecates the use of chloral in this form of the disease ; he strives to raise and sustain the bodily powers by the use of stimulants. The prognosis is very grave ; the author's five cases all proved fatal within four days, and only one out of Magnan's seven is reported as having recovered.

The question as to the degree in which individual peculiarities, either physiological or pathological, influence the effect of chloral, is of great interest. At a certain stage and degree of the delirium, doses of 60, 90, and 120 grains may be given in rapid succession without causing any quieting or hypnotic result. This is especially true in cases which first come under treatment when the delirium has reached its highest point, but in which neither the small, frequent pulse, nor the high temperature, described above, are present. The dose should never be further increased, for the author has several times seen the most dangerous symptoms supervene quite suddenly after this course had been adopted ; after the immediate danger had been averted, the patients slept one or two hours, but, on waking up, were again as restless as ever. Dr. Fürstner never now exceeds the ninety grain dose ; experience often enables the physician to predict whether chloral will have any effect in a given case or not, so that, when the prospect is negative, the drug may be altogether omitted from the treatment.

In the great majority of cases of delirium tremens, however, chloral is a most valuable remedy, especially if attention be paid to the stage of the disease in which it is administered. It acts best in those cases which come under treatment at the commencement of the delirium ; it often causes sleep in them, and either cuts short the attack or greatly diminishes its severity. Even if it produce no effect at first, it may often be given again with advantage after the patient has been isolated for a night or so, and a remission has set in. Sleep may often be procured by small doses in patients who have been most noisy and restless throughout the night, although large doses have been given the evening before.

The author considers that 60 to 90 grains of chloral, given in one or two doses, should very rarely be exceeded in delirium ; he protests against the indiscriminate administration of the drug in this disease, but expresses the highest opinion of its value if regard be had to the time at which it is given, to the dose, and to the condition of the patient.

As to the influence which various complications

should have upon the treatment, the author believes that, when pneumonia or pleuritis is present, more than from 30 to 60 grains of chloral would be dangerous, owing to its proved tendency to cause congestive conditions in the lungs. If rest be not procured by this quantity, the patients should be secluded; Dr. Fürstner has frequently taken this course, and has never seen any ill effect from it. It seems much more reasonable to allow a patient with delirium tremens and pneumonia to move about freely in warm clothes and in an even temperature, than to keep him in a fixed horizontal position and to give large doses of chloral. Wine or spirits in small and regular doses, with as nutritious a fluid diet as possible, should of course be given. The occurrence of delirium tremens in surgical cases may be frequently prevented by the timely and prophylactic administration of chloral and stimulants.

The results obtained by the above treatment in the Vienna Charité during the year 1875 are related, and the author regards them as favourable, considering the constitutional condition of many of the patients. Of 433 patients treated in 1875, a large number of whom had complications, 55 died. Of 226 treated in the first eight months of the year 1876, only 17 died, though among the fatal cases there are recorded two fractures of the skull, and one fracture of the neck of the thigh-bone with great injury to the soft parts. Among the whole 226 cases 20 were complicated by lung-affections, 11 by erysipelatus disease, and 68 by epilepsy.

Another class of cases of alcoholism which are admitted to infirmaries hardly requires any medical treatment in the narrower sense of the term. It consists of drinkers who have lived among unfavourable surroundings, and have had insufficient food. They have usually sunk to the bottom of the social scale, and are no longer fit for work. Besides the other symptoms of alcoholism, they suffer from sleeplessness, vivid dreams and hallucinations, but they are generally quiet in their outward bearing. Cleanliness, good food at regular intervals, and a moderate allowance of good stimulants, are usually sufficient to procure sleep, and some degree of mental and bodily restitution; but the patients have to be kept in hospital much longer than cases of delirium tremens. After their discharge they suffer a relapse much sooner than the acuter cases. Dr. Fürstner asks whether the hospital is the proper place for the treatment of these chronic toppers. They have there every comfort, including stimulants, without being obliged to work; it is very rarely that any definitely curative result is obtained; the cost of maintaining such patients is very considerable, and they are really only encouraged to resume their old habits of intemperance.

These last remarks apply equally to the next group of cases described. The study of epilepsy as one of the results of the misuse of alcohol deserves more attention than has hitherto been paid to it. It is remarkable that in North Germany the proportion of cases of delirium tremens complicated by epilepsy is much larger than in other parts, *e.g.*, Bavaria and the Rhine. Westphal found that in Berlin over 30 per cent. of patients admitted had previously had epileptic attacks, while another 30 per cent. became epileptic during the attack of delirium for which they were admitted. According to the writer's experience in Vienna, these figures are rather below than above the mark, but they are the more remarkable when compared with the figures given by Magnan and Rabuteau, which show only 46 cases complicated by

epilepsy out of a total of 668. In a further observation, Magnan found, among 155 cases, only 17 which were accompanied by epilepsy. The last-named observer holds that certain kinds of spirituous liquors are much more prone to produce epilepsy than others; it is only in this way that the great difference in the proportion of cases in which this affection complicates delirium tremens in Berlin and Paris respectively can be explained, for there is no ground for believing that either any physical peculiarities or difference in the mode of life of the inhabitants of the two cities can account for the fact.

The prognosis as to life and social position is grave in all cases of alcoholism, but it is especially bad when epilepsy exists as a complication. These patients are most liable to suffer relapses, and are constantly being readmitted into hospital; their physical, intellectual, and moral powers decline very rapidly, and they quickly become chargeable to the public rates. That these patients improve rapidly while in hospitals, that is, with rest, appropriate food, and absence of alcoholic excess; that under these circumstances the fits gradually cease with the increase of the patient's bodily and psychic powers; that the administration of bromide of potassium must be continued in large doses for months in order to overcome the irritability which the central nervous system has acquired, and thus to cure the tendency to epilepsy; these considerations lead to the belief that the best therapeutic results could be obtained in the cases now under discussion, if they were treated early, and could be detained for a sufficient length of time in suitable institutions. Lunatic asylums are not suited for these patients, apart from the fact that it would seldom be possible to send them thither. It would seem to be the truest economy to establish special institutions for the treatment of the various forms of disease arising from the abuse of alcohol. It would then be possible to revive in the patients their previous habits of regular employment, and thus to lay a foundation for their future social existence. Many persons might thus be restored as useful members to society, who now end their days in lunatic asylums.

CHAS. S. W. COBBOLD, M.D.

## ON EPILEPSY DUE TO MALFORMATION OF THE SKULL.\*

By Professor CH. LASÈQUE.

WE confound under the name of epilepsy two orders of morbid manifestation, *viz.*, attacks of convulsions with complete loss of consciousness, and attacks of epileptic disease with the same character returning at intervals more or less remote, and following an evolution proper to them. The difference between the two is the same as that which separates the *insultus hystericus* and *hysteria* properly so called. As articular pain in the rheumatic diathesis is the accident of that disease, so, in a great number of cerebral diseases, epileptic attacks are produced concurrently with the most diverse symptoms. The fundamental lesion being cured, the attacks disappear never to return. It is important from a clinical point of view to separate absolutely these mixed attacks from the true simple epilepsy. It is difficult; but here, as in all diagnosis, certainty is more nearly reached by referring the symptoms to a type or standard, always in every case looking more particu-

\* *Annales Médico Psychologiques*, September 1877.



larly for those features which approach to or diverge from the type.

Imperfect forms will not be now considered. Various intoxications, of cerebro-spinal localisation, give rise to attacks more epileptiform than epileptic. Passing by many worthy of notice, alcoholic poisoning only will now be spoken of. It is observed to occur in those alcoholics who have the epileptic aspect. They are few in number, not a dozen cases having been observed by the writer in an extended experience. It occurs thus. The patient, under the influence or not of chronic alcoholism, gives himself up to drink and loose living; not drinking methodically at a fixed hour and dose, after the manner of the alcoholic, he has fallen under a chance influence, and substituted acute alcoholic poisoning for the slower form. The state in which he is found after this excess is a mixture of drunkenness and alcoholism. The general excitement is extreme, and is shown more in physical symptoms than in mental state, the psychical condition showing itself in an astonishing restlessness. The pulse is frequent and bounding, the skin hot, the perspiration profuse and constant, the eyes injected, the tongue dry, the vision uncertain or disturbed, without distinct hallucinations, the hearing is not acute, the taste is indifferent. This is a picture of acute alcoholism. Suddenly the epileptic attack bursts forth, terrible and excessive in its severity. It manifests itself by tetanic rigidity, and by strong clonic convulsions, by a strangulation which does not produce cyanosis, but a purple congestion of the face, which is swollen, hot, covered with perspiration, the eyelids swollen, the lips open, the tongue protruding between the teeth. It is truly a terrible sight, but it has not the cold aspect of true epilepsy. After this the patient dies, and his death is a testimony that the attack touches more closely on eclampsia than on epilepsy. We may add that the attacks show indefinite varieties, from simple trismus, œsophageal spasm at the moment of deglutition of liquids, convulsive trembling of the limbs, the retraction of the penis, often extreme, etc., up to the maximum kind cited above. These semi-attacks, which we refuse to name epileptic, occur frequently; it may be said that subacute alcoholism is never quite free from them. They have a great nosological importance, since they permit the establishment of a gradual chain between the trembling of complete alcoholic intoxication, and the convulsions carried to their last limit. When a patient has passed through this condition he does not remain epileptic. He recovers, that is, until he has an acute relapse, it may be again and again; and yet relapses are rare. Every person who, following an epileptic attack provoked by drink, continues epileptic, has been epileptic previously, only the inquiry has been insufficiently conducted.

Neither invoking nor rejecting the results of experiments upon animals, Dr. Lasègue simply looks to observations on the human subject. In seeking to establish a parallel between alcoholic and true epilepsy, it may first be stated that it consists of attacks solely due to the toxic ingestion of alcohol, and not of continued epilepsy; that the attack shows itself under various bastard forms, unequal in their duration as in their intensity, and that the symptoms do not follow any adherence to the type. What is true of alcoholic epilepsy is true of all toxic epilepsies. With these toxic epilepsies are placed those having their origin in intracranial tumours, which may or may not be of a syphilitic nature. Contemporary syphilography will furnish plenty of instances. There is no doubt

that these epileptic attacks may supervene intercurrently in the course of syphilitic encephalitis, and it is not less certain that convulsive attacks constitute one of the essential elements in the diagnosis of cerebral tumours. If one analyse the symptoms in these cases, it is seen that the epileptic attacks, great or small, are analogous to those in alcoholism. They are, in fact, a kind of adventure in the course of the disease, and the medical judgment turns upon the phenomena which fill up the intervals between the attacks, the cephalalgia, partial paralyses, intermittent spasms, insomnia, etc. The epileptic attack neither sums up nor composes the disease. Even while the patient is free from the attacks, he not the less remains in a pathological condition.

The true epileptic attack, disengaged from accessories, exempt from durable complications, is produced after the injury to the organism, with depression of bone, projecting splinters, or more or less circumscribed depression of the bony tables. A very small splinter will determine an attack. A workman is struck on the vertex by a stone; he falls, and becomes unconscious, becomes comatose, perhaps also has convulsions of longer or shorter duration. He recovers perfectly; two months later an attack of epilepsy, the first, takes him; it comes without warning and seemingly without cause. The attacks are repeated at various intervals of weeks or months; they are always the same in character, sometimes followed by comatose sleep, sometimes accompanied by vague delirium. This patient, owing to his wound, is epileptic for life, if art do not step in or a spontaneous cure (a rare event) take place. Epilepsy undergoes no change of character as time passes on, but it may be complicated by secondary troubles.

There is, however, a class of true epileptics, and that the most extensive one. To it belong all those patients who fill our asylums, throw families into despair, and for whom the physician can hold out no hope. It is this class that forms more especially the object of the present inquiry. A disease of development, it manifests itself between certain ages. It does not appear after twenty years of age. Better known than the other diseases allied to evolution, it is modified neither by the progress of life nor by the transformation of character, like scrofula and chlorosis. Its course and its positive characters are such that they have been established by centuries of observation. Unlike other affections, it quite suddenly makes an explosion under a form and with a violence of attack which always remain characteristic of it. The first attack is the exact counterpart of all which follow, as intense, as complete. The daily attacks may come at longer or shorter intervals, and we rejoice to see the intervals between them lengthen, not because we find the disease improving, but because the nocturnal attacks are less painful to the patient. Sometimes the attacks are always of a slight character, sometimes very frequent, or, on the contrary, at very long intervals; it obeys no rule, and can be subjected to no provision. The complications borrow nothing from the attack properly so-called, which deviates not, but often relieves cerebral complications. The dementia, acquired idiocy, and continued insanity, represent the stupor more or less durable; and when these alterations of the second order are established, they have no influence on the course nor the mode of the attack. The first attack is as sudden as those which succeed it. It occurs amidst the most flourishing health, without prodromata or any relation to the usual habits. One

often wishes to attribute it to an occasional cause, in the hope that the removal of the cause may be followed by a disappearance of the disease. The history of preparatory aura is full of exaggeration. In some epileptics the attacks are exclusively in the morning, sleep seeming to be a necessary antecedent; neither the depth nor the lightness of the sleep, nor dreaming following on digestive disturbances, modifies the attack. For the patient, who for years has only had fits in the early morning, may be quite suddenly struck down at midday. The duration of the attack is so constantly the same that any departure from the rule furnishes the element of a doubt in the diagnosis. The first question which arises on examining an epileptic patient is, what time does the attack last from its commencement to the beginning of the somnolent period? If it be said to be of variable duration, judgment may be reserved. The succession of symptoms of which epilepsy is composed at all epochs of the disease is not less constant. Some stages may be of variable intensity, but the essential phenomena are never absent. If the blood-stasis, which causes the lividity of the face, be less marked, if the tonic convulsions predominate in the clinical sequence, if the bladder or the rectum participate in the spasm, if the tongue be retracted into the mouth or if it be bitten between the teeth, if the saliva be abundant or frothed on the lips, the fact has no importance. The epilepsy of which I speak is implacable, it is never cured; modern treatment has succeeded, and it is one of its conquests, in retarding or suspending the attacks more or less.

Epilepsy, then, a disease of evolution, is not hereditary. This proposition seems to have excited some surprise. It is, however, no novelty, and this is no defence of the fact, but simply a conveyal of it to the commentator. The formula of epileptic heredity, if it exists, will be that of all genealogies, "*Epilepticus autem genuit epilepticum*". But statistics (and numerous they are) have sufficed to prove that direct engenderment is the exception. Epilepsy is transmitted so rarely that no popular dictum has dared to affirm it; "from an epileptic father an epileptic son", has greater reason to be called a medical aphorism. Without this connection, we may see that epilepsy approaches deaf mutism by vice of conformation.

Are we to conclude that epilepsy is an affection produced by spontaneous generation, and owes nothing to its antecedents? It would be well if it were so. It is, on the contrary, one of the diseases in the genesis of which the health of parents has a great influence, in an indirect way, as in deaf-mutism. If one inquire into the family history of true epileptics, a limited number of collateral cases is found. The ancestors, when they have presented morbid disturbances, have been attacked by very various affections of the nervous system; by the oddness of confirmed alienation they have contracted marriages of consanguinity, or there has been drunkenness, debauchery, or some other moral lesion. In certain cases, a difficult labour or some fatal alteration may be sufficient to determine epilepsy in the individual. It often happens that the physician is consulted as to the advisability of an epileptic marrying. We all recognise the possibility of the transmission in such a case of morbid nervous influence. But it is necessary to define the sense of our words in naming this transmission, or rather influence, epileptic heredity. Why does the epileptic type escape all the fundamental laws of pathology? Why has it neither evolution nor involution? Why does it invariably reside in its essential manifesta-

tion, the attack? Why do the complications and severity of the onset never change? Why does not death follow as a consequence? It is because true epilepsy is not a disease but an infirmity, which is governed not by rules which govern the sick, but by such as influence the infirm. The invariability, the immobility, the incurability, the fact of being a fixed centre, round which multiple and secondary accidents group themselves, makes that which would otherwise be complex simple, that which was obscure clear.

Infirmity is acquired only by two processes; either by a traumatic or unchanging lesion, or by a spontaneous deformity. Passing by the first order of facts, non-traumatic epilepsy does not occur at any particular age; it makes its appearance, as has been elsewhere said, from the ages of ten to eighteen. The child reputed epileptic from birth comes under another category. The adult becomes epileptic more slowly, without relation to age. From ten to eighteen years of age an evolution of the bony plates of the cranium is accomplished. The very numerous sutures at the base become consolidated in mass or in portions. It is at the moment when this process is complete, a variable time within the limits of several years, that the epilepsy appears. The malformation of the parietal and occipital bones where they form the vault of the skull is often compensated for, and neutralises in whole or in part any evil effect. It is not thus with the bones which are attached together at the base and to the face, grouped about the anterior segment of the occipital foramen, solidified one with another, and subject to rebound (*contre coup*) from a distance in its various forms.

This consolidation is effected in virtue of a physiological law, without any disturbance of the health which can furnish a reason. Normally, it assures the symmetry of the osseous machinery which makes up the conformation of the base of the cranium; abnormally, it shows itself by asymmetry. This is a fact which has long been overlooked; this malformation of the foramen magnum plays a rôle in the genesis of epilepsy. The zoologists have the credit of having defined a law which finds its strict application in medicine, viz., that any of the characters which serve for classification may remain latent, and be revealed only by a *post mortem* examination. If these basic deformities of the cranium are not discovered except at the *post mortem* examination, they cease to be of much practical value. But it is not so, for the asymmetry of the face which corresponds with that of the base of the cranium is easy of observation during life, by a little careful study. The epileptoid asymmetry shows itself by a more or less notable prominence of one of the portions of the face, the right side being most often affected. This globular projection occupies the suborbital region in the greater number of cases; sometimes it is carried further back to the suture between it and the corresponding parietal bone, whose asymmetry it may compromise. A case presenting this feature is at present under the observation of the author. This prominence is perceptible both to the sight and the touch—to the touch by passing the fingers simultaneously backwards and forwards over both sides of the face; to the sight by turning the head backwards so that the greater part of the frontal bone is in a line with the horizon. If the deformity be limited, I hold it to be doubtful, and one must fall back upon the face, where certain osseous deviations may be detected on examination sometimes, an asymmetry



of the orbits, sometimes of the malar bones, of which one may be bulged inwards. Inspection of the palatine arch furnishes indispensable information in some cases; the suture which follows the median line being somewhat oblique, and the two sides of the vault of the palate not taking the same curve.

These asymmetries are nearly always manifest at the first glance, but sometimes they require methodical and prolonged examination. They seem to resolve themselves into two types; either the face has undergone a movement of rotation inversely to the frontal bone, or it is carried away in the same direction. In the first case, to a right frontal projection corresponds a left malar projection. In the other, the projections are seen on the same side. The first form is most common. The soft parts of the face follow the deformity of their osseous substance. The muscles are by the convexity submitted to unequal traction, and do not contract equally on both sides. Sometimes the two eyelids are drawn down, sometimes the lips deviate and turn obliquely outwards, sometimes the folds of the skin are more marked in one portion of the face. These accessory deformities have little interest, and often require quite a different interpretation. Important as variations in the soft parts of the face are, as bearing upon cerebral conditions, they have, taken alone, no connection with epilepsy. Dr. Lasègue concludes by asking the assistance of those physicians who have large clinical opportunities, in verifying his remarks as to these malformations in epilepsy; remarking that, if in a case of epilepsy the attack has come on within the prescribed limits of age, and if it coincide with osseous malformation, the disease must be viewed as due to a vice of development, and not to any accidental lesion.

CHARLES ALDRIDGE, M.D.

#### GERRARD AND OTHERS ON THE ALKALOID AND ACTIVE PRINCIPLE OF DUBOISIA MYOPOROIDES.

IN the LONDON MEDICAL RECORD for March (page 131) was given an abstract of a paper by Dr. Ringer and Mr. Tweedy on the mydriatic properties of duboisia myoporoides. The following communication on the properties of the plant, read by Mr. Gerrard at a recent meeting of the Pharmaceutical Society, is taken from the *Pharmaceutical Journal and Transactions* for April 6.

The natural order in which the above named plant has been placed (*Solanacæ*), and its powerful physiological action, especially in dilating the pupil of the eye, and causing dryness of the mouth and thirst, are facts which, when considered together, lead at once to the inference that its activity must be due to an alkaloid, having properties in common if not identical with, atropine. The drug having come somewhat prominently under my observation, through my having made preparations, referred to in Drs. Ringer and Tweedy's paper on Duboisia in the *Lancet* of March 2, and having heard Mr. E. M. Holmes's paper read before the Pharmaceutical Society on March 6, I felt desirous to investigate it closely, but the material at my command was insufficient to carry on a research for its active constituent, until, through information conveyed me by Mr. Holmes, I was able to obtain supplies of the extract.

The extract I received proved, upon examination, to be an aqueous one, and was submitted to the following treatment: one thousand grains when thinned,

by the addition of an equal volume of water, were treated with alcohol, till no further precipitation occurred; the alcoholic solution was filtered, and the insoluble matter washed with alcohol. The alcohol was now distilled off, and the residual extract diluted with a small portion of water, treated with ammonia in slight excess, and shaken with chloroform; the chloroform, separated and distilled, yielded a varnish-like residue, having a powerful alkaline reaction. By re-solution in dilute sulphuric acid and addition of ammonia a dull grey precipitate was produced, immediately aggregating into oil-like drops heavier than the mother-liquor. The alkaloid was finally abstracted with ether, which yielded, after evaporation, 21 grains. The alkaloid appeared as a yellow viscous mass, freely soluble in alcohol, chloroform, ether, benzol, and carbon bisulphide, fairly soluble in water, and imparting to it a decided alkaline reaction; solutions of the alkaloid in the preceding solvents upon spontaneous evaporation yielded no crystals. A portion of the new alkaloid, converted into sulphate and treated with various re-agents, was found to give reactions so similar to atropine that I determined to test it side by side with that alkaloid, the better to observe their relations and differences.

Both duboisia alkaloid and atropine gave white precipitates with tannic acid and iodo-hydrargrate of potassium, those with tannic acid being soluble in hydrochloric acid. Hydrates of potash, soda, and ammonia gave white precipitates with both, soluble in excess. Chloride of gold and perchloride of platinum yielded lemon-yellow precipitates. A common characteristic of the preceding precipitates was that they rapidly formed conglomerate masses. Neither sulphocyanide of potassium nor perchloride of mercury gave precipitates, unless with the latter reagent, when the alkaloidal solutions were concentrated. Strong nitric acid causes no visible change with atropine, but with duboisia alkaloid a very slight brown colour is produced. With strong sulphuric in the cold, atropine remains unaffected, but on heating the mixture it darkens, evolving a pleasant aromatic odour, which the addition of bichromate of potash intensifies, and at the same time yields a green precipitate of oxide of chromium, and vapours of an acid reaction. Duboisia alkaloid, in contact with sulphuric acid, behaves differently to atropine. In the cold it gives a reddish-brown colour, and, when heated, an odour unpleasant, and suggestive of butyric acid. Upon the addition of bichromate of potash, no reduction of the chromium to its oxide was apparent, but the evolved vapour was of acid reaction.

Both duboisia alkaloid and atropine, when heated between watch glasses, partly volatilise, condensing as transparent varnishes. Both their salts dissolve easily in alcohol and water, but with difficulty in ether.

I prepared small quantities of neutral solutions of sulphate, chloride, nitrate, phosphate, acetate, hydrobromide, and tartrate of duboisia alkaloid upon watch glasses, and left them to evaporate spontaneously. Only in the case of the sulphate and hydrobromide were a few tufts of needle-like crystals observable. The material at my disposal did not admit of further attempts to obtain it crystalline. The neutralising power of dilute sulphuric acid upon the new alkaloid was tested side by side with atropine, and found to be thus. Two grains of new alkaloid required four drops of the acid, whilst the same quantity of atropine required three drops.

As no individual reaction, which specially distinguishes atropine from other alkaloids, had been

applied to the duboisia alkaloid, one was sought for with that object. I found in Gmelin's *Chemistry*, vol. xvi, that it is stated by Hinterberger that an alcoholic solution of atropine assumes a blood-red colour when cyanogen gas is passed through it. I have twice repeated the experiment, passing the gas ten minutes through the atropine solution, but no colour-change whatever was observable. It was therefore useless to apply this test, and I conclude that the statement of Hinterberger must be an error.

Again, Selmi, in the *Gazzetta Chimica Italiana*, vol. vi, p. 155, mentions that atropine boiled with barium-hydrate in contact with air gives a pleasant odour of hawthorn flowers. Portions of atropine and duboisia alkaloids were treated with barium-hydrate and boiled; the odour evolved by atropine was pleasant but rather more suggestive of oil of gualtheria than hawthorn, whilst the odour evolved by duboisia alkaloid was unpleasant and altogether different to the atropine odour. After a search through many chemical works, I failed to find any other reactions of atropine worthy of a trial, and it is a matter for regret that chemistry should be at a loss for a reaction to indicate with certainty this powerful poison.

It being desirable to obtain a knowledge of the physiological properties of the new alkaloids, Dr. Sydney Ringer and Mr. Murrell undertook the work, and to them I am indebted for the following note.

*Action on the Eye.*—It quickly and widely dilates the pupil. Mr. Blake dropped a small quantity of a solution, 1 in 120, into an eye. In ten minutes the pupil was widely dilated.

*Action on the Skin.*—Mr. Blake injected one-sixtieth of a grain under the skin of a patient troubled with night sweating. The sweating was much prevented.

*Effect on the Mouth.*—Mr. Blake injected one-sixtieth of a grain hypodermically into two patients. The injection caused great dryness of the mouth.

*Antagonism to Muscarine.*—Like atropia it antagonises the action of muscaria on the heart of a frog. We exposed the heart of a brainless frog, and applied a minute quantity of extract of *aminita muscaria*. The heart-beats had nearly stopped in five minutes, there occurring only an occasional pulsation. We then applied a small quantity of solution of the duboisia alkaloid, 1 in 20, and, in half a minute, the heart beat strong and naturally, 34 per minute.

*Tetanising Property.*—Like atropia, also, this alkaloid produces tetanus after the lapse of some hours or days. We injected one-seventh of a grain, one-fifth of a grain, and one-seventh of a grain respectively, under the skin of three frogs. Slight but distinct tetanus occurred in 24 hours.

The preceding experiments show that in its physiological action duboisia alkaloid entirely agrees with atropine, but this agreement by no means proves that alkaloid to be atropine, for most alkaloids of the order *Solanaceae* have common physiological actions, and at one time were considered to be chemically identical, but now they are generally understood to be different bodies. Although it has been shown that in the majority of its properties this duboisia alkaloid is like atropine, I am inclined, for the following four reasons, to the conclusion that it is not atropine.

1. Its solubility in water is twice or more than twice that of atropine.

2. It has more power in neutralizing acids than atropine.

3. Its behaviour to sulphuric acid in the cold, and also when heated with bichromate of potash, differs from the behaviour of atropine.

4. When boiled with baryta the odour it evolves is entirely different to that given off by atropine under the same conditions.

I have submitted to Dr. Paul a quantity of this new alkaloid, and he has been good enough to undertake its examination; when this is accomplished, perhaps a definite conclusion can be arrived at as to the name it shall bear. If it does not prove to be atropine, following the usual rule, it should be called duboisine; meantime it must remain an alkaloid without a name.

In conclusion, I think medical men and pharmacists in Australia may congratulate themselves that they have at their disposal, provided the supplies of the plant are abundant, a source from whence to obtain by the simple process I have here given a therapeutic agent of great value.

In the discussion on this paper, Mr. Holmes said that he had received a note from M. A. Petit, of Paris, which might throw some light on this matter. M. Petit said that this alkaloid appeared to be different from atropine, being crystallisable with great difficulty, and ten times more soluble in water. He did not think this great solubility was due to impurity, because what he had operated with had been twice treated with ether in the presence of an excess of bicarbonate of potash. Aqueous solutions of this alkaloid were fluorescent and dichroic, being yellow by transmitted, and bluish green by reflected, light. The double chloride of gold and of the alkaloid crystallised well would permit of its being analysed and its constitution determined. The alkaloid was easily obtained by treating an aqueous solution of the extract with bicarbonate of potash until an alkaline reaction was produced, and then agitating with ether. He had obtained 1.10 gramme of the alkaloid from 60 grammes of the extract. Mr. Holmes further stated that Dr. Bancroft, of Brisbane, who discovered the properties of duboisia, was present, and, he hoped, would say something upon it.

Dr. Bancroft was glad to find that the results described agreed with those obtained by the chemist in Brisbane, who had worked hard at this question for six months for him. He could make no crystals, except that occasionally a chance crystal or two would appear. At first it was thought the extract had decomposed, and on one occasion the chemist worked with 50lbs. of fresh leaves, but the result was the same. He (Dr. Bancroft) was not sure that the physiological action would not be found to be different from that of atropine; it was certainly much stronger, for the watery extract alone was equal, weight for weight to atropine. One very peculiar physiological effect was this. If a dose were given to a dog subcutaneously, he would walk straight forward, and if he got into a corner he would struggle and cry for a long time, and paw at the walls, but it appeared never to occur to him to turn round. The same thing would happen if he got mixed up with the legs of a chair; he would fight with them for some time before he got out, and seemed to have no notion of going anywhere but straight forward. On cats, however, it had not this effect.



## DAWSON ON THE SIGNS OF SCIATIC DISLOCATION OF THE FEMUR.

DR. W. W. DAWSON, Professor of Surgery in the Medical College of Ohio, contributes to the *Hospital Gazette and Archives of Clinical Surgery* an important paper on a hitherto unrecognised symptom of ischiatic dislocation of the head of the femur. He says :

Most writers describe the symptoms of dislocation into the ischiatic notch as differing from those of the iliac in degree alone, there being in the former less shortening, less inversion, less adduction, less flexion. Syme, some years ago, called attention to the arched position of the spine when, the patient being recumbent, the dislocated limb is pressed upon a flat surface. He insists that this is characteristic ; that there is no injury of the hip-joint, "whether fracture, dislocation, or bruise", which gives this sign. In this he is certainly mistaken, it is often, if not always seen when the head of the bone is upon the dorsum ilii. It is always present in the second stage of morbus coxarius.

Dr. Squires of Elmira, New York, suggested a much more reliable means of diagnosis, when he called attention to the fact that, in *ancient* dislocations backward, the head of the bone may be detected in the notch by inserting the finger into the rectum or vagina. I have found this to be true in *recent* as well as in old cases.

There is in the ischiatic dislocation, when the limb is extended, but little, very little shortening. The head of the bone is thrown backward, but usually very little upward, the ischiatic notch is upon an exact plane with the acetabulum, hence much shortening is impossible. For want of reflection upon this point, physicians have often been led into serious error, and into most annoying lawsuits. Instances have occurred where cases have been left as reduced, from the fact that, when extended, both limbs were of equal length. A case of this kind came under my observation, in which much trouble originated from a mistake of this character ; the limbs, when extended were of equal length, yet the head of the femur was in the sciatic notch, and was allowed to remain there.

Some years ago I observed that when the position of the dislocated limb to the body is changed, a marked difference occurs in its relative length. *If the patient be placed upon his back and the thigh be flexed upon the trunk at a right angle, then the knee of the dislocated limb will sink below that of the other side from one to two inches.* A moment's reflection will make this clear. The ischiatic notch is situated directly behind the acetabulum, the head being thrown from one to the other ; the limb is shortened the distance from the centre of the cavity to the centre of the notch. This, in all cases, will be as much as one, it may be two or more inches.

Dr. Dawson then gives extracts from the writings of Gross, Hamilton, Bigelow, Ashhurst, Gant, Bryant, Erichsen, Spence, Holthouse, R. Allen, B. Bell, Dorsey, Boyer, Lizars, and Petit, in order to show that up to this time no author, so far as he has read, has called attention to the difference in the length of the disturbed limb when extended, and when flexed at a right angle with the pelvis. The extracts also show that the earlier writers had very vague ideas upon dislocations of the hip. He says :—

A reference to the plates, but more especially a

trial with the skeleton, will make the matter patent to anyone. As an element in diagnosis, in both plain and obscure cases, I think it will be of value.

Figure 1 shows the position when the limbs are

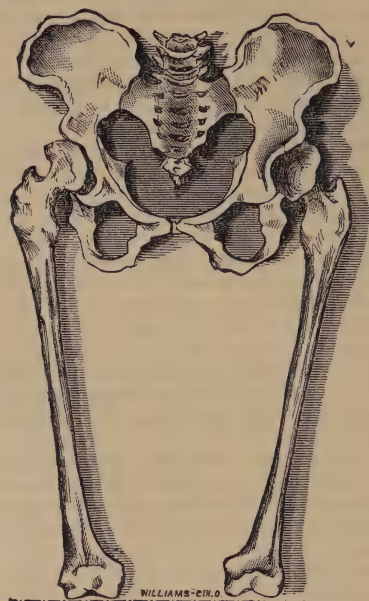


Figure 1.

extended ; the shortening is slight, very slight, because the notch is directly behind and upon the same plane with the acetabulum.

Figure 2 shows the limbs raised to a right angle

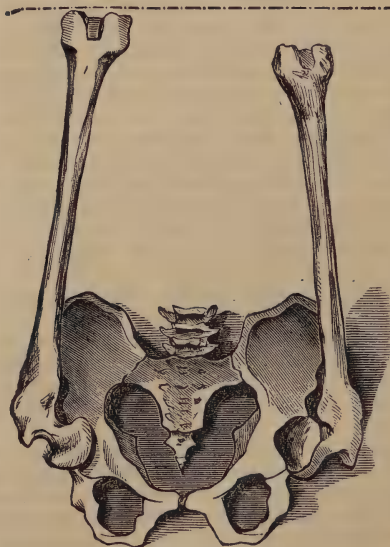


Figure 2.

with the recumbent trunk. The shortening, as will be seen, is very striking. It must be the difference between the centre of the acetabulum and the centre of the notch. This distance will be rarely less than two inches, often even more.

## EWALD ON THE CHANGES IN THE SMALL VESSELS IN BRIGHT'S DISEASES, AND THE DEPENDENT THEORIES.

Dr. Ewald, in an interesting and valuable paper, published in Virchow's *Archiv* for December, says :

Since Bright (whom Dr. Ewald, by a curious mistake, calls *John* Bright) discovered simple hypertrophy of the heart in 23 out of 100 cases of renal disease, which could not be accounted for by valvular disease or atheroma, a discussion has waged as to its cause ; some see in its relation to renal disease cause and effect ; others consider the presence of some third factor necessary. Bright himself took the latter view in regarding it as due to the impurity of the blood, and consequent obstruction to the capillary circulation. Johnson and Traube sought its cause in the anatomical changes in the kidney ; the former believing that the renal arterioles became tonically contracted, while the latter localised the obstruction in the restricted capillary network consequent upon the contracting change. Subsequently Johnson brought forward his observations on the hypertrophy of the arterioles in the pia mater, skin, and mesentery, and, widening the basis of his theory, asserted that the arterioles throughout the body underwent the same tonic contraction, and compared the process with what occurs in carbonic acid poisoning. Still more recently, Gull and Sutton have started a fresh theory ; they have described a special change in the blood-vessels, a thickening of the lymph-sheaths, with degeneration of the muscular tunics, to which they have given the name of "arterio-capillary fibrosis", and finding this in cases independent of renal disease, *e. g.*, cardiac valvular disease, etc., they see in these changes the primary lesion, and in the renal degeneration only a local intensified expression of the general morbid process. Dr. Ewald has undertaken careful observations on this head, but has not succeeded in assuring himself that, in these cases, there is anything deserving to be considered as a special change in the lymph-sheath ; he finds only general thickening of the arterial wall, chiefly confined to the muscular coat. He examined arterioles by isolating them, and measuring their lumina and coats under the microscope ; he found that a certain definite proportion existed in vessels of a certain calibre between the width of the lumen and the thickness of the coats ; and when these normal proportions were departed from, he regarded the vessel as hypertrophied. Obviously, he says, it is not easy to discriminate between coats thickened by hypertrophy and those thickened by contraction, but it is not very probable that tonic contraction would remain after death ; for reasons hereafter to be stated, he does not believe that the narrowing of the lumen is due to active contraction, as Johnson states. The thickening of the muscular coat, of which he says there can be no doubt, is quite distinct from atheroma, syphilitic thickening, or the various arterio-capillary changes described by Neelsen, Obersteiner, Wedl, or Charcot, in affections of the nervous system.

He divides his cases into three groups : I. Interstitial nephritis, and interstitial and parenchymatous nephritis (mixed) ; II. Parenchymatous nephritis ; III. Other diseases. In reference to the first group, he says that although it is easy enough to distinguish extreme cases of parenchymatous and interstitial nephritis, yet of many cases less well marked, it cannot easily be said whether the interstitial or

the parenchymatous change is the more marked ; these he has subdivided according as the kidneys weighed more or less than 300 grammes (10.6 ounces). Of pure cases of interstitial nephritis, weighing under 200 grammes (about 7 ounces), he had only three, so that this third class is unnecessary ; such cases, he observes, are much less rare on the continent than in England and Norway, or on the sea-coast. He says that there seems to be a perfect inverse proportion between the weight of the kidneys and of the heart—the lighter the former, the heavier the latter ; but no such distinct relation exists between the state of the kidneys and the vascular changes ; as, in five cases in which the kidneys were relatively light, the vascular changes were quite absent, or only feebly marked. In one case of nephritis, secondary to lead-poisoning, with phthisis, there existed an exception to the rule of the cardiac hypertrophy, but this is explained by the ill nourished state of the patient. No such explanation presents itself, however, for the vascular changes in the cases previously referred to ; and it can only be assumed that, under certain unknown conditions, these changes do not develop themselves.

His observations on the first group lead him to the following conclusions.

1. Nearly all cases of chronic interstitial nephritis have muscular hypertrophy of the heart and vessels.
2. Two thirds of the mixed forms under 300 grammes weight have cardio-vascular hypertrophy, one third have cardiac hypertrophy alone ; of those over 300 grammes, all have cardiac hypertrophy, some have vascular hypertrophy.

Of the second group he concludes that, in a little less than a third of the cases of parenchymatous nephritis, simple hypertrophy of the heart is present.

Under this head, however, were included six cases of amyloid degeneration which were not classed apart, because the amyloid change was slight, while pronounced parenchymatous changes were present.

In the third group were 24 cases, of which 2 were phthisis, 2 typhus, 1 ovarian cyst, 1 leukaemia, 2 atheroma with senile marasmus, 1 meningitis, and 13 disease of the valves of the heart. In those cases which were not complicated with renal affection, no vascular changes were found. Once they were found in a case of secondary nephritis. Diseases of the circulatory apparatus, with or without renal complication, can lead to cardiac hypertrophy, but not to vascular changes. The rule is—that secondary nephritis, and enlargement of the heart, which have some other causes than a primary renal affection, do not lead to vascular hypertrophy.

Dr. Ewald finally considers the causes of these changes. He admits that the data requisite to finally settle the question can only be accumulated by many years' observation in a large hospital ; but it is permissible to criticise the current theories. He cannot admit Gull and Sutton's view that the vascular change is primary and a part of senile degeneration, because it is met with in quite young persons, and often immediately dependent upon a blood-poison (scarlet fever) ; in which cases there can be no question of senile change, debilitating influences, or atheroma. He considers the renal affection as primary, and, in reference to Mahomed's "pre-albuminuric stage", questions whether he ascertained the existence of cardiac hypertrophy. Against Johnson's view he urges that he leaves out of account the action of the depressor nerve, which would retard the action of the heart and bring down the arterial tension. He (Dr. Ewald) finds



himself compelled to side with the older writers, who found the obstruction in the capillaries; the obstacle to the circulation of the overlaid blood acts in a purely mechanical manner upon the arterial system, raising its tension; and the increased tension in the aorta compels the heart to more active contraction independently of all central influences.

In a sort of appendix he describes the changes in the vessels of the kidney itself; these he regards as purely local and part of the chronic inflammatory process, as described by Friedländer and others.

ROBERT SAUNDBY, M.B.

## ANATOMY AND PHYSIOLOGY.

ROY AND BROWN ON A NEW METHOD OF MEASURING THE BLOOD-PRESSURE IN THE SMALLEST ARTERIES, VEINS, AND CAPILLARIES.—Dr. C. S. Roy and Dr. Graham Brown (*Verhandlungen der Physiologischen Gesellschaft für Berlin*, February 28, 1878) brought before the notice of the Berlin Physiological Society, at their meeting on February 15, a novel instrument devised by them for measuring the blood-pressure of small arteries, veins, and capillaries, and some of the results attained thereby. The instrument consists of a glass water-manometer connected with a cylindrical capsule fastened to the objective of a microscope by a strong India-rubber air-filled tube; the lower surface of the capsule is made of brass, its wall of brass, and its upper surface of a transparent soft thin animal membrane (the urinary bladder of a frog will do), such as perfumers use to tie the stoppers of their bottles. When the column of water in the manometer is raised, the air in the capsule is compressed, and the membrane expanded. To complete it, a T-shaped tube is fixed into the India-rubber tube, and to the vertical leg of the T an India-rubber bottle is fastened. This last is clamped between two pieces of brass fixed by a screw, by turning which its sides can be squeezed together. By this means the air can be drawn out of the bottle into the capsule and into the manometer, and the height of the column of water marks the pressure employed. A transparent vascular piece of tissue (web, lung, or mesentery of a frog, caudal fin-membrane of a fish, etc.) is laid upon the membrane and fixed there by a glass plate. The soft yielding mobile membrane clings to the tissue, and the pressure upon the apparatus is recorded by the manometer. When without any tension the web of a frog is laid out thus between the membrane and covering glass, the circulation in the small arteries, veins, and capillaries can be observed. If the atmospheric pressure be raised by the compressor to 100 or 150 millimètres of water the circulation stops; first in the capillaries and veins; by higher pressure (200 to 350 millimètres), according to the individual peculiarities and varying vital conditions of the animal, in the arteries also. Special controlling experiments taught that the resistance of the tissues surrounding the vessels, proper precautions being taken, do not influence the estimation of the pressure. By this apparatus their observers are able to make manometric observations without injury to the frogs, which are equal to kymographic observations (impossible on such small animals) while it possesses the merit that the breadth of the vessels and their relations can at the same time be estimated. The full account of the observations made with this instrument will shortly

be published; in the meantime they have ascertained the following.

1. The column of water necessary to suppress the circulation increases, *ceteris paribus*, with the breadth of the vessels.

2. A vicarious action of neighbouring arteries was often noted, one being narrowed while the other dilated, and *vice versa*.

3. Goltz's experiment made the pressure sink to zero. Frequently, some time after, a venous reflux followed, which equalled 70 to 100 millimètres of water.

4. After temporary anæmia the vessels widened, and the returning blood poured in under higher pressure.

ROBERT SAUNDBY, M.D.

BENEKE ON THE CONDITIONS OF GROWTH OF VARIOUS ORGANS.—In a communication to the *Marburger Naturwiss. Sitzungsbericht*, 1877 (abstracted in *Centralblatt für die Medicin. Wissenschaften*, February 23), Dr. Beneke arrives at the following conclusions as the result of numerous observations. 1. The human heart grows relatively quickly during the first months of life, then rather slowly up to the thirteenth or fourteenth year; it then increases very considerably in volume during the development of puberty, and when this is completed, grows more slowly. 2. The "puberty-development" of the heart is to be regarded as a very important phase in its development, in regard both to the physiological and the pathological occurrences of this period of life. 3. In proportion to the length of the body, the heart of the child has normally a volume more than three times less than in the adult (after the completion of puberty). 4. The large arterial vessels are unequally wider in the child than in the adult. They attain their relatively narrowest condition at the time of puberty. The more considerable and rapid the growth in length before this time, the less, as a rule, appears to be the increase in calibre of these vessels. 5. In consequence of these conditions of the growth of the arteries, the relation between the volume of heart and the calibre of the arteries, and consequently the blood-pressure, is quite different in childhood and after the completion of puberty. The blood-pressure in the child's organism must be much less than in the fully developed adult. 6. The pulmonary artery is normally larger than the ascending aorta in childhood. Towards puberty the two vessels are nearly of the same size, and in the adult the pulmonary artery is normally a little narrower than the aorta. 7. The result of this condition must be a difference of the blood-pressure in the lungs during the different periods of life. It is evident that the pressure is greater in the child than in the adult. This condition is probably compensated by the greater growth of the left ventricle as compared with the right, and by a relatively considerable increase in the calibre of the ascending aorta. 8. For the access of puberty, the development of the heart and arteries is of the most essential importance. 9. In certain defined constitutional anomalies (cancer, scrofulous phthisis, rickets) there are certain differences in the size of the heart, the calibre of the arteries, the size of the lungs and liver, as well as in the relation of the size of the pulmonary artery to that of the aorta, and these differences may be transmitted hereditarily. 10. The calibre of the arterial system seems to be of importance in the course of acute diseases; paralysis of the heart occurs more early and more readily in persons with narrow than in those with wide arteries.

It was found that the arteries were remarkably narrow in the greater number of deaths from enteric fever. 11. Narrowness or wideness of the arteries is by no means equally distributed over the whole system. Variations may in some cases depend on the local development of disease. For instance, in ricketty children with symptoms of hydrocephalus, the large arteries of the brain were often found to be remarkably wide.

A. HENRY, M.D.

DOGIEL ON THE GANGLIA OF THE HEART.—Dr. Dogiel (*Archiv für Mikroskopische Anatomie*, Band 14, Heft 2), has studied the distribution of ganglion-cells in the heart of man and many animals, and denies that they are found in the substance of the organ. They are most plentiful around the terminations of the great veins and in the auriculo-ventricular furrow. They are found among the fibres of the cardiac nerves, but no strict connection between the two has been discovered. He says that, although many ganglion-cells seem to be apolar, he is convinced that almost all those of the frog's heart have a straight process that is directly developed from the protoplasm of the cell, and consists of a bundle of nerve-fibres. As to the spiral processes, they have no existence; and though spiral fibres are to be seen in some preparations, they are merely folds of the connective tissue capsule, which extends over the process. He thinks that these folds are caused by the acetic acid used in the preparation.

AEBY ON THE CHEMISTRY OF BONE.—In the *Centralblatt für die Medicinischen Wissenschaften* for March 9, Dr. Carl Aeby has a paper on the relation of the hygroscopic properties of bone to their density and volume. He observes: 1. That fresh bone on cooling, even in water, to the temperature of the external air, acquires certain hygroscopic properties and loses them again on being warmed, thus affording a ready and simple means of determining the free water on the one hand and the water of combination on the other; 2. That the amount of water contained in cartilage and bone-earth (not bone ashes) is greater than that contained in an equivalent of compact bone, so that even fresh bone, when pulverised, absorbs a certain amount of specific water.

The specific gravity of bones is, therefore, an important pathological element, as affording an index to their porosity; while the constituent water bears a certain constant relation as regards weight to the amount of cartilage, and its quantity varies with the mixture of organic and inorganic matter. Thus human bones, as compared with that of the ox, are found to contain less mineral matter and more water, and are hence of less specific gravity; a distinction which may be carried far back, even to prehistoric times. And in tracing these differences—differences which distinguish the human bones from those not only of single orders of animals, but from those of the rest of the entire animal kingdom, it is necessary to examine the bone, not by cross sections merely, but by definite portions of them. The differences as to density and composition thus found to exist between various portions of one and the same bone, are often greater than those between the bones of whole orders of animals. This condition is strongly marked in the bones found among the ancient "lake dwellings". On cross section, these present a series of dark circular zones of various dimensions, standing out in sharp contrast on a lighter ground. These variations are always to be referred to a difference in density and composition,

and, finally, to the different hygroscopic character of the various layers of the bone tissue. It may be objected that, under all circumstances, the organic nidus of bone resists decomposition more powerfully than simple cartilage or gelatine where exposed to the action of water. But the true cause is the exclusion in bone, owing to the admixture of earthy matter, of more than a certain definite amount of water even when the bone is under water, whereby only a small organic surface is exposed to the action of water; and decomposition will proceed more or less rapidly, according as the exposed surface is greater or smaller; that is, according as the bone, or portion, is of greater or less density. This is well seen in the unequal preservation of the bones of the "pile dwellings", and also of bones long buried; where the human bones present an advanced state of corrosion and decomposition, while those of the ox, being of greater density, are scarcely and but superficially affected. The same is seen also in the bones of the same subject, or even in one and the same bone; the long bones are corroded and to a great extent destroyed, while the clavicle, the densest of human bones, is still intact.

We are thus enabled, also, to understand the phenomena presented by living and dead bones. A bullet striking a fresh bone has chiefly a tearing, separating effect; whereas, if it strike a dry bone, the result will be mostly a clean hole or a groove. But a dry bone is not chemically altered, and its diminished weight is due to the loss of its free water, which varies from 3 to 8 per cent. of its volume. Hence the tearing effect of a projectile will vary directly with the quantity of free water which the struck bone contains. The difference in the resistance of dead and living bones to mechanical force depends on changes in their molecular structure, determined by the fixation or liberation of water. The organic as well as inorganic constituents of bone are hygroscopic substances, whose capacity for water varies with the temperature and humidity of the atmosphere, subject, however, to the rigidity of bone as a mass; reduction of temperature has, therefore, a considerable influence on the hardness and resistance of the entire bone. W. J. TREUTLER, M.B.

AFANASIEFF ON THE STRUCTURE OF THE THYMUS.—Dr. Afanasieff of St. Petersburg has published two papers on the structure of the thymus in the *Archiv für Mikroskopische Anatomie*, Band xiv, Heft 1 and 3. He says that the organ is found in the five vertebrate classes, and its existence is doubtful only among the osseous fishes. It may consist of a cervical and a thoracic portion, but in man we find only the latter. Its size in the child, as well as its shape, is subject to great variations. There can be no doubt that its structure is essentially that of a lymphatic organ, but its early atrophy is remarkable. The concentric bodies, as they are called, have been noticed to lie in close connection with blood-vessels; but Afanasieff shows how extremely close that connection is. They begin, in fact, from a growth of the epithelioid cells, which encroach on the lumen of the vessel, and by proliferation give origin to the small cells that form the greater part of the corpuscle. Altered blood-discs have been found in their centre by previous observers. The appearance of these bodies, of course, implies a beginning of the decrease of the organ, or, at least, of that part of it in which they occur; and some of them are seen in organs which have not attained their full size. This simply shows that some parts may begin to waste



while the thymus as a whole is still growing. In time, the corpuscles themselves degenerate. "After the contents have passed through a fatty or colloid metamorphosis there remains in some corpuscles a homogeneous mass, with a dull or almost opalescent shine, and in others fat-globules of various size and highly refractive. Moreover, among the contents are found heaps of pigment and altered red blood-corpuscles." In consequence of the formation of these bodies, or perhaps from the same cause, disturbances of the circulation occur, as a result of which many red and white corpuscles leave the vessels and a growth of connective tissue begins, which is accompanied with the appearance of pigment. The lymphatic elements are compressed by the new growth, and in time fatty granules appear among them, and the degeneration is soon complete. In some animals the growth of connective tissue, in others the formation of pigment, is the prevalent phenomenon.

#### RECENT PAPERS.

The Physiological Character of the Adipose Tissue and its Relation to the Internal Organism. By Dr. C. Studiati. (*Commentario Clinico di Pisa*, January-February 1878.)

#### PATHOLOGY.

COLOMIATTI ON THE DIFFUSION OF CANCER ALONG THE NERVES.—Dr. Colomiatti relates (*Revista Clinica di Bologna*, and *Lo Sperimentale*, March) a case which occurred in Dr. Spantigati's practice in the Hospital of St. John, in Turin, in support of his theory of the manner of diffusion of cancer.

The subject was a man aged 40, who had apparently been always healthy, but in whom, after intense neuralgia in the part of the left cheek corresponding to the lower molar teeth, a tumour grew from the inner side of the gum, at the seat of pain. The tumour, which increased rapidly, was diagnosed by Dr. Spantigati as cancerous, and was removed, along with the portion of the lower jaw extending from the left canine tooth to the temporo-maxillary articulation. Surgically the operation was successful, and the wound soon healed completely; but, after remaining some time in hospital, the patient was obliged to return to his home, still suffering severely from acute pain, which was only temporarily relieved by subcutaneous injections of morphia.

The tumour, with the bone removed, was presented to Dr. Colomiatti for examination. It was lobulated, and nearly as large as a hen's egg. It contained in its substance the dental nerve, which, however, could be followed for more than four-fifths of an inch before its entrance into the dental canal. Along with the tumour a suprahyoid lymphatic gland was removed, as it was somewhat hard.

After a careful examination, Dr. Colomiatti was led to agree with Dr. Spantigati as to the carcinomatous character of the tumour. Its origin from the epithelial covering of the gum, at a point corresponding to the molars, explained, in his opinion, the dental neuralgia which preceded its appearance.

Dr. Colomiatti next turned his attention to the dental nerve, the posterior portion of which seemed to be more voluminous than normal. Sections of the portion comprised in the tumour presented remarkable changes, in explanation of which Dr. Colomiatti refers to the view held by Robin,

Key and Retzius, etc., according to which two forms of connective tissue enter into the formation of nerves—viz., the epineurium, and the perineurium with its appendage, the endoneurium.

The epineurium connects the funiculi, which form every nerve-trunk; the perineurium and endoneurium form an integral part of each funiculus. Their connective tissue consists of small membranous films, between which are the so-called perineural and endoneural lymph-spaces, which, however, have nothing to do with the common lymphatic system. These membranous films, the endoneural membranes, which proceed from the perineurium, surround the nerve-fibres. Each nerve-fibre is thus suspended in a lymph-space.

In the case now under consideration, Dr. Colomiatti states that he found, on making section of the dental nerve, an abundant cancerous infiltration, diffused along the perineural and endoneural spaces, the perineurium presenting solutions of continuity, due to the invasion of the epineurium by the cancer-cells.

Dr. Colomiatti says that this is the second case in which he has observed the diffusion of cancer in the inferior dental nerve. There is, however, a difference between the two cases. In the first (cancer of the lower lip), the disease was diffused by the lymphatic vessels belonging to the neighbouring glands; while, in the present case, the gland which was removed, in consequence of being hard and probably cancerous, was found, on examination, to contain no cancer-cells, and the diffusion of the disease had taken place solely along the nerve. This supports the idea of Colomiatti, that the nerve may become diseased before the lymphatics, and independently of them; the lymphatics become infected later, and, when they do, the disease proceeds more rapidly. In this case it was observed that the anterior portion of the nerve, which was examined, had no cancer-cells in its lymph-spaces; hence he infers that the diffusion took place centripetally.

The persistence of the severe pains, in spite of the complete removal of the tumour with the neighbouring parts, is ascribed by Dr. Colomiatti to the diffusion of the disease along the nerves; and he advises that, before undertaking an operation in such cases, the state of the nerves should be observed.

MARCACCI ON CHANGES IN THE SYMPATHETIC NERVE IN A CASE OF DIFFUSE ECZEMA.—In *L'Imparziale* for January 31, Dr. G. Marcacci relates an interesting case.

A man aged 70 was admitted into hospital under the care of Dr. Michelacci, apparently suffering from acute diffused eczema, which was attributed to exposure and rain during many hours in succession in January 1877. His health had previously been good; he was seized with a heavy pain in the head, and the scalp became covered with a thick furfuraceous layer, which gradually spread over the whole cutaneous surface. There never was the slightest fever, no visceral change, nor constitutional fault. During the first days of his stay in hospital, purgatives were given to relieve constipation, and the skin was sprinkled with powdered starch and charcoal. Considerable improvement followed, but on March 10 a copious exudation of lymph and serum set in in the region of the chest, and produced rapid emaciation. He died of congestion of the lungs on April 1. A necropsy, made by Dr. Brigidi, gave the following results.

The surface of the skin was covered with fine black

crusts, due to the finely powdered charcoal, and was divided by clefts, at the bottom of which the rete mucosum was plainly seen, of a red colour. The subcutaneous layer of fat was very thin. The left pleural cavity contained 385 grammes (about 13½ ounces) of clear serum; the left lung was healthy. There was red hepatisation of the superior lobe, and of the upper part of the inferior lobe of the right lung. The abdomen presented nothing worthy of note. On microscopic examination of the skin, there was found to be great hyperæmia of the dermis, but no irritation in the connective tissue. The horny layer of the epidermis had disappeared in many parts; the Malpighian layer was thinned, and the Malpighian cells were more granular than in the ordinary state. In the spinal cord and medulla oblongata the nerve-fibres and cells were normal; the blood-vessels were much injected. The cervical and celiac ganglia were the seat of hyperæmia, visible to the naked eye, and still more apparent in microscopic sections. Preparations immersed in a mixture of distilled water and glycerine, without the addition of acetic acid, showed an excessive number of nuclei. The nerve-cells were reduced in size by the lateral pressure of the masses of nuclei, their protoplasm was turbid, and an abundant red granular pigment occupied the intercellular spaces.

Dr. Marcacci observes that the changes in the ganglia demonstrated the existence in them of a process of irritation, probably of inflammation. He remarks that while, in the hitherto known description of cutaneous lesions associated with changes in the nervous system, the nervous lesions have always been found in the centres, or in the peripheral nerves dependent on them, no mention has been made of the changes in the sympathetic. He leaves the explanation of the dependence of the skin-disease on the changes to be settled by the observation of facts, and by greater advances in the physiology of the sympathetic system. A. HENRY, M.D.

SMITH ON ACUTE YELLOW ATROPHY OF THE LIVER.—Dr. R. Shingleton Smith (*British Medical Journal*, March 9) publishes a very interesting case of this disease.

J. G., 42, married, labourer, was quite well till a month before admission to hospital, when he became sick on two or three occasions, and noticed that his urine had become yellow; his general health had been good; he never had jaundice before; he admitted having been drunk on beer about once a week during the previous summer; he had served in the Crimea, and had since been in New Zealand. On examination, the amount of liver-dulness was found to be considerably diminished, there being only two fingers' width of dulness in the right nipple line, the lower limit of dulness being three inches above the costal border, and the upper limit two inches below the nipple; the spleen was not obviously enlarged. There was no ascites, no enlargement of the abdominal veins, no hæmorrhoids, no melæna. The temperature was normal, or slightly subnormal. The pulse varied, at first low (48), becoming quicker (72-96) as the disease approached its termination. Eighteen days after admission he became delirious; hitherto his mental condition had been normal, he was able to get up, his appetite was good, but he had emaciated rapidly. The following day he was apathetic, but conscious, although he had been delirious in the night; the next day, however, he became quite un-

conscious, and remained so for twenty-four hours when he died.

At the necropsy, the skin was deeply jaundiced; the external bile-apparatus was healthy; the liver was half the normal size, not flattened, smooth on the surface, bright yellow, firm in consistence, but flaccid; the colour was not uniform, the yellow lobules being separated by pale interlobular tissue. During life, leucine and tyrosine had been found in the urine, and leucine was found in the liver after death.

Fresh sections, made with Valentin's knife and examined in glycerine, showed the following morbid conditions: 1. Considerable hypertrophy of the fibrous stroma of the organ. The lobules were distinctly marked in consequence of the development of a considerable quantity of interlobular fibrocellular tissue. The whole of the lobules, too, were pervaded by a distinct intercellular network of fibrous tissue prolonged from the interlobular growth. 2. An atrophic condition of many of the lobules, their diameter being considerably reduced. 3. Almost complete disorganisation of the liver-cells. Yellowish brown masses, resembling the cells, could be seen here and there occupying the position of the cells; but, under the higher powers, were resolved into granular masses of *débris*. 4. The whole tissues of the organ were pervaded by small globules looking like oil, but many of them were found with higher powers to be leucine-globules. 5. The yellow colouring matter was seen to have crystallised in small rhomboidal masses, looking like minute crystals of hæmatoidine. Many of the leucine-globules obtained from the urine during life, and many of those found in sections of the liver, had lost their original yellow colour, but contained instead one or more minute crystals of hæmatoidine.

After hardening in chromic acid, these appearances were considerably modified. 1. The interlobular stroma resolved itself into a small-celled growth resembling adenoma, and the lobules were infiltrated with cells of a similar character. 2. The liver-cells were much more distinct than before, and now presented the aspect of a cohering mass of brown globules, preserving the shape of the original cells, excepting that they appeared to be smaller than the healthy liver-cell. No nucleus and no distinct oil-globules were visible. 3. The leucine-globules and the minute crystals of hæmatoidine were not present.

Dr. Smith alludes to the differences of authorities as to the lesions observed by them in this disease, these appearances agreeing with the descriptions of Winiwarter (and Frerichs), but differing from those of Cornil and Ranvier (and Rindfleisch). He doubts whether his case should be considered one of acute yellow atrophy simply, or whether it should not be regarded as a case in which the atrophic process supervened upon an organ already in the early stages of cirrhosis.

LESSAR ON THE PATHOLOGY OF DROPSY.—Dr. O. Lessar (*Virchow's Archiv*, January 1878) gives the following particulars of a case of albuminuria and dropsy under the care of Dr. Friedländer, which was diagnosed as nephritis, and died. The urine had been highly albuminous, and contained "hyaline and granular cylinders". At the necropsy, the body was extremely œdematous, and the epidermis in places was raised in little blebs; dissection showed dropsy of the cavities and œdema of the lungs, but no lesion of any organ to account for



the dropsy, the kidneys being perfectly normal in all respects.

"The most scrupulous histological investigation failed to find a trace of interstitial growth, proliferation of nuclei, amyloid degeneration, or more than traces of fatty degeneration of the epithelium." On inquiry, it turned out that this man had dated the commencement of his illness from an extensive inunction of his body with petroleum, which, about four months before his death, he had employed as a means of relieving himself from scabies. He used the petroleum for four days, and a week elapsed before he noticed a swelling of the feet, which, rapidly increasing, spread over the abdomen and thorax; in the course of a fortnight it disappeared, but returned after eight days, and persisted up till his death. While in hospital, the radial pulse was noted to be small, empty, and of low tension; the blood-corpuscles were few, but their relative proportions were normal. Temperature was normal. Histological examination of the skin showed localised areas of inflammation; along the veins and lymphatics a small-celled growth existed, and in all the layers of the cutis there was a widely distributed nuclear proliferation. Lassar says the dermatitis was doubtless the result of the petroleum inunction, and albuminuria was the consequence of the skin-affection, the renal disease being purely functional. [The quantity of urine passed by the patient is not stated.—*Rep.*]

GOGUENHEIM AND LUY'S ON CEREBRAL LOCALISATION.—At the meeting of the Société Médicale des Hôpitaux on February 23 (*Progrès Médical*) M. Goguenheim relates the case of a man who was seized with paralysis of the left leg, without alteration of sensibility or intellectual disturbance. Some days afterwards, the paralysis, which at first seemed to diminish, increased, and was accompanied by paralysis of the upper extremity of the same side; at the same time he became comatose, and his temperature rose. He died soon afterwards. A cortical lesion affecting the upper end of the ascending frontal convolution had been diagnosed, without attempting to define the nature of the lesion. At the necropsy, the lesions were found situated in the ascending convolution and the paracentral lobe; it was evidently meningitis, probably tubercular.

M. Luys remarked that this case confirms the law, according to which monoplegiæ affect the side opposite to the lesion, and equally supports the doctrine of cerebral localisation established by similar facts, and by the observations of limited atrophies of the brain in old standing cases of amputation. The brain (which was shown) presented in a well-marked degree the distinctive character between the brains of man and of woman; the paracentral lobe projected appreciably beyond the neighbouring convolutions in man, while in woman it remained at the same level. In reply to a request to give his opinion as to the precise seat of the centre for the man, he said this could not be done absolutely, but, in the case reported by M. de Beauvais, of a convict who received a blow on the head with a piece of bottle, which produced a fracture of the temporal region in a spot corresponding exactly to the middle part of the fissure of Rolando, there supervened a monoplegia of the arm which lasted three weeks, and was followed by muscular atrophy, which made very rapid progress.

ROBERT SAUNDBY, M.D.

EISENLOHR ON THE ANATOMICAL CAUSES OF INFANTILE PARALYSIS.—Dr. Eisenlohr (*Allgemeine*

*Zeitschrift für Psychiatrie*, Band 34, Heft 2) says that after Charcot, Joffroy, Parrot and Duchenne had stated that a primary change in the motor ganglion-cells of the anterior cornua of the grey matter of the spinal cord was the anatomical cause of infantile paralysis, while Roger and Damaschino, on the other hand, found, in several cases, evidence of myelitis in the anterior cornua of the cervical and lumbar regions, Leyden pointed out that the disease in question is not always due to one and the same cause, but may be caused by various anatomical lesions.

The author relates the case of a child, aged nine months, who suffered from unmistakable spinal paralysis of both extremities, and died of follicular enteritis. Simple atrophy of the muscular fibres was found, without either increase of nuclei, development of fat, or fatty degeneration of the muscular elements. The morbid appearances in the spinal cord were, atrophy of the anterior roots, thickening of the neuroglia and of the fibrous septa in the anterior and lateral columns, with atrophy of the nerve-fibres extending through the greater part of the length of the cord; degeneration or disappearance of a number of ganglion-cells in the anterior cornua of the dorsal and lumbar regions; marked proliferation of nuclei in all the columns as well as in the grey matter of the sacral and lower lumbar regions.

Attention is drawn to the extension of the process over so considerable a length of the cord, and to the participation of both the white and grey substances. The appearances observed are regarded as the results of a diffuse interstitial myelitis. Perhaps the variations in the anatomical lesions found in infantile paralysis may cause corresponding differences in the clinical features of the disease.

CHAS. S. W. COBBOLD, M.D.

## RECENT PAPERS.

- Hypertrophic Changes in the Epidermis: Callosities, Corns, Horns. By M. Guibout. (*Gazette des Hôpitaux*, Feb. 7.)  
 Study of the Changes of the Larynx in Tuberculosis. By Dr. Charles Fauvel and M. Jules André. (*Ibid.*)  
 Pulmonary Tuberculosis. By Dr. Grancher. (*Archives de Physiologie*, Jan.-Feb. 1878.)  
 On the Structure, Origin, and Development of Cysts of the Ovary. By MM. de Sinety and Malassez. (*Ibid.*)  
 On the Change of the Marrow in Long Bones after Inflammation experimentally produced. By Dr. F. Busch. (*Berliner Klinische Wochenschrift*, April 1.)  
 The Pathology of Nervous Tissue. By Dr. G. Tizzoni. (*Centralblatt für die Medicin. Wissenschaften*, March 30.)  
 Tuberculosis and Giant-cells. By Dr. P. Baumgarten. (*Ibid.*)  
 Note on a Case of Trophic Troubles, with Elevation of the Temperature, consecutive on a Wound implicating several Nerve-branches. By M. Georges Hayem. (*Archives de Physiologie*, March-April 1878.)  
 Researches on the Lesions of the Nervous System in Diphtheritic Paralysis. By M. J. Déjérine. (*Ibid.*)  
 On the Phenomena which follow Injection of Chlorhydrate of Morphine. By M. P. Picard. (*Gazette Médicale de Paris*, March 1878.)  
 Embolism of the Pulmonary Artery. By Dr. B. Luzzato. (*Annali Universali di Medicina e Chirurgia*, March.)

## MEDICINE.

FOURNIER ON GENERAL PARALYSIS OF SYPHILIS.—M. Fournier (*Progrès Médical*, October 13 and 27) in a clinical lecture at the Hôpital St. Louis, lays down clearly the true relation or want of relation between general paralysis of the insane in its typical form and that of syphilis. Undoubtedly general paralysis does occur in syphilitic subjects sometimes, but *sometimes* only, and in quite too exceptional a manner to warrant our regarding it as depending

directly upon the evolution of the syphilitic morbid processes. It is reasonable to suppose that a disease which affects the nervous system so profoundly as does syphilis, may be the determining cause in some cases. In syphilis itself the mental disturbances are not quite those of general paralysis; they may, indeed, present all varieties of excitement, violence, depression, or dementia, but they do not follow any special type, as do those of general paralysis. The condition of *bien être*, the perfect self-satisfaction of the unfortunate subjects of general paralysis, who imagine themselves kings, prophets, great artists, who revel in fancied wealth, and propose every day fresh schemes, magnificent in the extravagance and boundlessness of their scope, all that makes up the common description of their delirium is absent, or at least only exceptionally present in syphilis, and when present, the extravagance is tame and humble in comparison. Tremor may be present in syphilis, but is only occasional; that of the tongue especially is very rare, while the tremor of the upper lip, so frequent in general paralysis, is perhaps never present—at least, M. Fournier has never seen it. Above all, the tremor lacks the constant, fibrillary, vermicular character of that of general paralysis. These differences are not merely of degree, but definite, and more easily recognised clinically than described by words. Paralysis and paresis of all kinds are common in syphilis, and correspond to what is ordinarily understood by those terms; whereas in general paralysis it is more a want of co-ordination and defect of precision than abolition of muscular power. Again, in syphilis there is excessive frequency of partial paralysis affecting a special predilection for certain parts; for example, the muscles of the eyeball, a peculiarity which is not found in general paralysis. Hemiplegia, transient or permanent, is often one of the earliest phenomena of cerebral syphilis, and of great frequency in some period of the disease. Finally, in syphilis, motor phenomena, apoplectic attacks, etc., commence the affection; in general paralysis, intellectual and moral disturbances prelude the symptoms of cerebral disorganisation, while similar distinctions mark the course of the two diseases, syphilis being irregular, variable in its progress, in the succession of phenomena, and its duration; general paralysis, on the other hand, is regular, and of definite duration. The comparison of the general state of the patients in the two diseases gives not less striking distinctions, in syphilis, cachexia; in general paralysis, maintenance of nutrition, even embonpoint up to the very last. Finally, syphilis may be regarded as at least possibly curable, gloomy as is the result in most cases, yet differing even in this from the other absolutely, essentially incurable malady.

CHARCOT ON CHOREA IN OLD PEOPLE.—M. Charcot (*Progrès Médical*, March 9) says the chorea of old people does not differ from the ordinary form; it is rare; he has at present only two cases, and only three have been recorded by Roger, Sée, and Graves. It presents no modification except, perhaps, relative slowness of the movements, and very chronic course; in the two cases quoted it had existed 11 and 12 years respectively. It is incurable, but does not appear to endanger life. He has seen one patient, however, die in a typhoid state, with considerable elevation of temperature; another case terminated in maniacal delirium, with elevation of temperature. Most of the cases have appeared to be in a more or less pronounced state of dementia.

As to its etiology, it does not seem allied to rheumatism; in the necropsies made, no cardiac lesions were found. It appears to be an emotional disease, and, in several cases, supervened after some special cause of grief or agitation. This disease differs essentially from senile trembling, which has been sometimes called senile chorea.

ONIMUS ON TELEGRAPH-DISEASE (MAL TÉLÉGRAPHIQUE).—M. Onimus (*Progrès Médical*) has brought under the notice of the Société de Biologie of Paris a new dyscinesia, which he calls "mal télégraphique", due, he says, not solely to the fatigue of certain muscles, but to the constant tension of the mind. In addition to local symptoms, there are general phenomena, palpitation, vertigo, insomnia, cerebral disturbance, etc. People of nervous temperaments seem to be especially attacked.

ROBERT SAUNDBY, M.D.

LONGSTRETH ON CHANGES IN THE NAILS IN FEVER.—In the *Transactions of the College of Physicians of Philadelphia* for 1877, Dr. Morris Longstreth contributes an interesting paper on the changes in the nails in fever, and especially in relapsing fever. The author, having himself been attacked with relapsing fever, observed the condition of his finger-nails, and subsequently confirmed his observations by reference to hospital patients.

There were distinctly seen on the face of each nail two concentric lines extending from side to side with the convexity forward. The colour of these lines was a dense white; they were about one millimètre in breadth; the interval separating the lines was about the same breadth. The normal longitudinal striæ were not distorted, as is sometimes seen in other febrile affections. The borders of the lines were not absolutely sharply defined, but very slightly shaded off into normal nail-substance, less so, however, than in typhoid fever. The nail between these two lines appeared normal. These peculiar markings were not seen till they had advanced by protrusion beyond the lunula, with the colour of which they closely corresponded. There was no alteration in the form of the nails.

When the white lines advanced to the margin of the nails and were cut off, the nail-substance appeared more brittle than normal. Patients who had suffered one relapse showed two lines, while in one case, where two relapses occurred, there were three such nail-markings.

This sign appears of value for determining the pre-existence of the fever process, or for its exclusion. It has no significance until the febrile stage is past, and the nail becomes protruded from the lunula by growth.

During the continuance of fever, the epidermal layer of the skin around the root of the nail has been observed to become adherent to the horny nail; such an adhesion may be produced experimentally by scraping the root of the nail, and the condition of adhesion appears to indicate a malnutrition, which may be due to febrile changes.

FRANCIS WARNER, M.D.

ZIPPE ON DELIRIUM PRECEDING THE ERUPTION OF SMALL-POX.—Dr. Zippe relates (*Allgemeine Zeitschrift für Psychiatrie*, Band 34) a case of considerable interest from a medico-legal point of view, in which a man who had murdered one of his children was acquitted on the ground that the act had been committed while the prisoner was suffering from the primary fever of variola.



M. E., a labourer, aged 35, who lived alone with his three children and was much given to drinking, returned earlier than usual from his work one afternoon. The children noticed a change in his appearance and demeanour; he treated them harshly and cruelly as he had never done before. On the following day he remained at home, took no food, and spent most of his time in bed; early next morning his youngest child was found moribund in the street below his window; the elder children could give no explanation of the occurrence as they had slept soundly; but the father, on being questioned, at once admitted having thrown it from the window, "because he could no longer support it". Two days after this, while he was in custody, the eruption of small-pox appeared upon him. Other circumstances besides those given above, pointed to the patient's having been delirious during the night in question. He was consequently acquitted, it being believed that his condition when he committed the murder was such that he could not be held to be responsible for his actions.

C. S. W. COBBOLD, M.D.

SCHMITHUISEN ON CHRONIC THROAT-CATARRH. —Dr. Schmithuisen communicates the following two cases of long-standing chronic throat-catarrh to the *Berliner Klinische Wochenschrift* of March 18. Both occurred in the clinique of Dr. Stoerk, in Vienna, and came from the neighbourhood of that city, and not from Poland, Galicia, or Bessarabia, where most of the cases hitherto observed had originated.

The first case was that of a female patient aged 17, of healthy appearance, who was admitted in July last. Both parents were said to be healthy, although on the father's side there was a history of struma. The patient stated that from early youth she had always suffered more or less from catarrhal symptoms, accompanied by an expectoration which was at first thin, but subsequently became thick and of a greenish colour, and within the last two years also foetid. In the spring of last year she became hoarse and lost her voice, and there was some dyspnoea. The aphonia lasted seven weeks, when it was removed by galvanism; but since then dyspnoea, foetid expectoration, etc., had increased. No history of syphilis could be made out. The pharyngeal mucous membrane appeared reddened and covered with a thin purulent coating. The lower part of the larynx, and the trachea down to the eleventh or twelfth ring, were covered with thin grey-green encrustations which, projecting into the tracheal tube, united and formed a complete lining to the trachea, considerably reducing its calibre, while the points of the individual crusts projected like stalactites into the tube. Under the free application of solutions of common salt, these crusts were changed into a soft, pasty, and foetid mass, and were thus expectorated, leaving the trachea clear. Dyspnoea, too, disappeared. But, although the application of lotion of sodium chloride was continued, and in spite of the additional application of astringents, nitrate of silver, etc., the abnormal secretion continued to form as soon as removed. The microscope showed the crusts to consist mainly of detritus, pus-corpuscles, sporules, and bacteria, and occasionally accumulated masses of leptothrix fibres. The second case was that of another female, aged 41. She had suffered as a child from frequent nasal catarrh, and since her 17th year from cough and hoarseness, which gradually increased, sometimes to dyspnoea and aphonia. The sputum consisted

partly of tenacious purulent mucus, and partly of firm dark crusts. The naso-pharyngeal mucous membrane was pale, atrophied, and somewhat flaccid, but its surface was intact. The upper portion of the larynx was hypertrophied; the false vocal cords and the posterior wall of the larynx were much thickened, so that the cords touched and projected considerably into the larynx, separating only on a deep inspiration, and showing the true cords. The mucous membrane was, on the whole, pale, slightly reddened only here and there, and atrophied, but there were no erosions or granulations. The parts below the vocal cords were also much thickened and swollen, and the swelling extended into the trachea as far as it was visible. In isolated places, especially in the anterior angle, and both above and below the cords, was formed a tough, ragged, firmly adherent secretion (false membrane?) of a greenish colour, which gradually accumulated, and reduced the voice to a hoarse whisper. When after a time this was expectorated, the voice became clearer, though still considerably hoarse. Foetor of the breath was never observed.

In both patients the affection seems to have commenced in the naso-pharyngeal region, and to have gradually extended downward into the larynx. The etiology of these cases is very obscure, while the prognosis is highly unfavourable. The thickening and degeneration of the mucous membrane of the air-tube gradually increase, and by impeding respiration, and possibly becoming associated with pulmonary disorder, destroy the patient.

GROEDEL ON THE TREATMENT OF APOPLEXY WITH HEART-DISEASE.—Some years ago Dr. Beneke pointed out the benefit to be derived in cardiac affections, especially those following on articular rheumatism, from the use of warm saline baths impregnated with carbonic acid. His observations are fully borne out by the physicians at the baths of Nauheim, who find these baths beneficial not only to the rheumatic affection, but also to the attendant heart-disorder. Dr. Groedel (*Berliner Klinische Wochenschrift*, March 11th) has further found that these baths are useful in cases of (so-called) apoplexy accompanying heart-disease. They soothe the exalted action of the heart, while the paralytic symptoms and general health undergo marked improvement. A case in point is singled out from many others as having been continuously in observation. It is that of a lady, aged 49, who, when 18 years old, had a severe attack of articular rheumatism, which left insufficiency of the mitral valve. Five years ago she had a slight apoplectic seizure during the night, which passed off in a couple of hours; and, since then, such attacks recurred at intervals, until three years ago she had an unusually severe one, followed by complete hemiplegia of the left side, with long continued unconsciousness. In a few days these symptoms passed off again, with the exception of the hemiplegia. The case was doubtless one of cerebral embolism rather than of apoplexy. She was ordered to use the above saline baths at a temperature of 88° F. every other day, which was continued for seven weeks. Under this treatment, the heart's action, previously very irregular, became almost normal, and all oedema, which existed before, disappeared. This favourable state of things continued until the following winter, when palpitation, oedema, etc., returned, but were again relieved during the ensuing summer. There has been no further symptom of embolism.

Dr. Groedel concludes that, in cases of true apoplexy, especially those occurring in consequence of atheromatous arteries, the use of the warm saline baths is inadmissible, since they tend only to increase the blood-pressure on the weakened arterial walls. On the other hand, these baths can only be useful in cases of cerebral embolism, with consequent paralysis. For, by the increased action of the heart, the blood-current is hastened, and thus the formation of coagula and deposit is prevented, since this can only occur in a sluggish flow of blood. Moreover, when a part of the cerebral substance has its supply of blood cut off by an embolic clot, and so becomes atrophied, an increase of blood-pressure may yet restore it. Nutrition through a collateral circulation, and a removal of the loss of power, etc., result.

W. J. TREUTLER, M.B.

**FOX ON A CASE OF ULCERATIVE ENDOCARDITIS.**—At the Bath Pathological Society, Dr. Arthur W. Fox read a paper (*Lancet*, March 1878) upon a well-marked case of this somewhat rare disease, which had been diagnosed during life.

C. A., aged 26, shoemaker, married, had acute rheumatism 11 years ago, and since then several subacute attacks. During the last 11 years he had frequently ejected blood, seldom a day passing without some hæmorrhage. This had been less since his marriage five years ago. There was no history of syphilis. On December 1, 1876, cardiac dulness was increased. A loud systolic bruit masked the second sound, and was heard all over the chest, back, and front, and up the carotids; it was greatest at the mitral area. There was no œdema. He improved greatly under iron and digitalis. On Jan. 14, he caught cold at a courting meeting, and, two days afterwards, when seen, looked stupid and heavy. The heart-symptoms were not changed physically, but the bruit completely obscured the lung-sounds. Respiration was hurried; the tongue was dry, red, and slightly furred; he felt thirsty, and had no appetite. The bowels were loose; urine scanty, albumen one-sixth; pulse 120; temperature 101° F.

On the 17th, at 1 P.M., he was lying on his back in bed, heavy, and obtuse; the pupils were widely dilated and sluggish. Pulse 144; temperature 104.6°. On the 18th, stupor increased, and he died comatose at 11 P.M.

The necropsy, thirty-six hours after death, revealed hæmorrhage beneath the dura mater and arachnoid, and into the lateral ventricles. The heart was greatly hypertrophied, weighing 22 ounces, the mitral orifice being thickened and contracted, and surrounded by ulcerations. The case confirms in many points the description of this fatal disease which Rosenstein gives in Von Ziemssen's *Cyclopædia of Medicine*.

**HEMIPLEGIA AS A SEQUEL OF TYPHOID FEVER.**—Two cases are reported in the *Medical Times and Gazette*, vol. i, 1878.

Case I was under the care of Dr. Cayley. A lad, aged 11, was admitted to hospital after ten days' illness. At the end of a month he was nearly convalescent, when he suddenly became paralysed on the left side; speech was unaffected. At the end of six weeks from the time when the paralysis commenced he was able to walk, though still a considerable loss of power was present. The heart and urine were normal.

Case II was under the care of Dr. Gee. A lad, aged seven years and eight months, was admitted

July 9, 1877. Seven weeks before admission, he had suffered from typhoid fever. Two weeks ago he had a fit, which lasted seven hours. No loss of power was noticed by the mother for twelve hours or more after recovery from the fit, and then the right side was paralysed, and speech was lost. After three or four days he began to say "No, daddy", in reply to any question. The heart-sounds were normal. There was no albumen in the urine. Ophthalmoscopic observations were satisfactory. On August 30, motor power was improved, more words were used; sometimes uttered a long speech of unintelligible sounds, occasionally an intelligible sentence. The health was good. It appeared probable that, in this case, some branch of the left middle cerebral artery had become plugged by some broken up fibrine from the left auricle. The aphasia appeared more of the ataxic than the amnesic form.

**MANSON ON CHINESE HÆMATOZOA.**—Dr. Patrick Manson of Amoy contributed a long report upon this subject to the *Customs' Gazette*, copious extracts from which are to be found in the *Medical Times and Gazette*, vol. ii, 1877, and March 2, 1878. More than 30 cases of diseased and healthy persons are recorded where hæmatozoa were found in the blood; and his conclusions are as follows.

1. A large ratio of the population of the province, and probably of other parts of China, is infected with the *filaria sanguinis hominis*, possibly one in thirteen.

2. The presence of the *filaria* does not necessitate morbid results.

3. The *filaria* may be present at one time and absent at another.

4. At one time or another it is very generally associated with elephantoid disease, and is almost certainly connected with the cause of such affection.

5. It is sometimes associated with a diseased condition characterised by frequently recurring attacks of fever, accompanied by general anasarca unconnected with disease of the heart or kidney.

**O'NEILL ON EXOPHTHALMIC GOÏTRE AND DIABETES OCCURRING IN THE SAME PERSON.**—Dr. William O'Neill (*Lancet*, March 2, 1878) reports an instructive case of Graves's disease complicated with diabetes. It greatly improved under treatment, but, unfortunately, the patient was carried off by intercurrent bronchitis when least expected. Dr. O'Neill, while agreeing with Dr. Stokes's theory, that exophthalmic goitre is due to a "neurosis of the heart and probably of the cervical vessels", believes, from the clinical history of the case which he has reported, that the thyroid gland has something to do either with the production or with the continuance of the affection. Unfortunately, no *post mortem* examination could be obtained.

**SULLIVAN ON THE ACTION OF MALARIA.**—Dr. Sullivan, writing from Rome, continues in the *Medical Times and Gazette*, March 27, 1878, a series of papers on the origin and nature of marsh malaria, wherein all previous observers' views and theories are fully discussed. He thinks that we may conclude that a febrile disturbance, evolved in paroxysms of an essentially intermittent type, is generated in the human body when, exposed to the malaria emanating under certain conditions from marshes, it absorbs the albuminoid element contained in it; or, when exposed to the malaria from localities which, although free from marshes, possess the conditions common to them. This albuminoid element,



once absorbed in the human body, profoundly disturbs and paralyses the system of nerves which regulates the circulation of the blood, alters the composition of the blood, produces disorders of calorification, and congestion of internal organs, the most constant being that of the spleen.

RICHARD NEALE, M.D.

**JONES ON MALARIAL HÆMATURIA.**—In the *New Orleans Medical and Surgical Journal*, Feb. 1878, Dr. Joseph Jones, Professor of Clinical Medicine in the University of Louisiana, contributes a paper on the natural history and treatment of malarial hæmaturia. He says that in that form of malarial fever characterised by complete jaundice, nausea, incessant vomiting of green biliary matters, and hæmorrhages from the kidneys, the hæmorrhage from the kidneys is preceded by congestion of these organs, and is attended with desquamation of the excretory cells and casts of the tubuli uriniferi. Malarial hæmaturia (hæmogastric malarial fever), as a general rule, occurs only in those who have suffered from repeated attacks of intermittent fever, or who have been exhausted by prolonged attacks of remittent fever; and whilst some of the symptoms, as the nausea, incessant vomiting (and in some cases black vomit), and deep jaundice, and impeded capillary circulation, resemble those of yellow fever, yet there are marked differences between the two diseases. The presence of the albumen in the urine of malarial hæmaturia is attended also with coloured blood-corpuscles, excretory cells of the kidneys, and casts of the tubuli uriniferi, impacted often with coloured blood-corpuscles. Dr. Jones has even detected portions of the lining membrane of the Malpighian capsules containing coloured corpuscles, and deeply stained by the colouring matter of the blood. As a general rule, in severe cases of yellow fever, the tubuli uriniferi in the kidneys themselves, after death, and the casts in the urine excreted during the second stage of the disease, are loaded with yellow granular albuminoid and fibrinoid matters.

He then relates two cases. In both, there was found to be a diminution of the red corpuscles of the blood. The urine presented, as in other cases of the kind Dr. Jones has examined, the observations mentioned above.

In some of the cases, immense quantities of green biliary fluid were vomited, and the patients died in a state of hopeless collapse, with depression of temperature, and cold extremities, covered with a cold clammy sweat. As a general rule, suppression of the function of the kidneys is a fatal sign, and, as in yellow fever, may be attended with convulsions, delirium, and coma.

The pathological changes which he has observed after death are characteristic of malarial paroxysmal fever: enlarged slate and bronze-coloured liver, with pigment-granules; enlarged and softened, or indurated spleen, with altered globules and pigment-granules; gall-bladder distended with thick, ropy bile, presenting, when seen *en masse*, a greenish black colour, and in thin layers a deep yellow. As much as 1,600 grains of bile, of high specific gravity, have been obtained from the gall-bladder in malarial hæmaturia; whilst in yellow fever, not more than 120 grains of bile are, as a general rule, contained in the relaxed gall-bladder.

The bile of malarial hæmaturia is highly concentrated, and, as far as his experience extends, never contains blood; neither is the dark green (black) vomit of this diseased blood or altered blood, but it

is an acrid secretion from the stomach, highly charged with bile. Bile is universally present in the vomited matters of malarial hæmaturia. It is universally absent from the black vomit of yellow fever.

The kidneys, after death from malarial hæmaturia, present a deep red purple congested hue, and their sections, examined under the microscope, exhibit the tubuli uriniferi filled with coagulated blood. In many specimens, he had been able to ascertain that the rupture of the capillaries occurred chiefly in the Malpighian corpuscles, and has been able to trace the tubuli uriniferi through their whole extent, as brilliant opaque cylinders filled with coagulated blood. In yellow fever, the tubuli uriniferi are blocked up with detached cells, yellow granular and oleaginous matters, but not with blood-corpuscles.

Malarial hæmaturia and yellow fever, although possessing some symptoms in common, are distinct diseases, and require different modes of treatment.

In the treatment of malarial hæmaturia, Dr. Jones relies chiefly upon such measures as, 1. Prompt purgation, with such agents as calomel, extract of rhubarb, and aloes; 2. Counter-irritation over the region of the kidneys; 3. Local abstraction of blood over the region of the kidneys by cupping; 4. Quinine in full and sufficient doses to prevent the recurrence of the paroxysms. If rejected by the mouth, the quinine must be administered by the rectum; and if both avenues be closed, in virtue of incessant purgation and vomiting, then it may be introduced by subcutaneous injection, or through blistered surfaces; 5. Nutritious diet, in small quantities and at regular intervals, when retained by the stomach; 6. The persistent use of calomel, rhubarb, aloes and colocynth, in small doses, combined with quinine, at regular intervals three or four times a day, during the continuance of the jaundice, if the bowels are torpid. 7. After the establishment of convalescence, the continuous use of such tonics as the nitro-muriatic acid, and tincture of sesquichloride of iron, in combination with quinine; nutritious diet, generous wine, and change of climate to an elevated non-malarious region, if within the power of the patient.

#### RECENT PAPERS.

- Cerebral Rheumatism with Catalepsy. By Dr. S. Mancini. (*Lo Sperimentale*, March 1878.)  
 A Contribution to the Physical Diagnosis of Pleural Exudations. By Dr. O. Rosenbach. (*Berliner Klin. Wochenschrift*, March 25.)  
 The Non-identity of Variola and Varicella. By Dr. A. Dumas. (*Montpellier Médical*, March.)  
 On the Combination of Hemiplegia with Aphasia. By Dr. Jacobs. (*Deutsche Medicin. Wochenschrift*, March 30.)  
 Perityphlitis caused by a Common Pin: Death from Blood-Poisoning. By M. R. Boussi. (*La France Médicale*, March 9.)  
 Tetanus followed by Cure. By Dr. Stutel. (*Revue Médicale de l'Est*, March 15.)  
 Note on Recamier's Plan in the Treatment of Purulent Collections in the Liver. By Dr. Vidal. (*Lyon Médical*, March 10.)  
 Clinical Notes on some of the Eccentricities of Typhoid Fever. By Dr. K. N. Macdonald. (*Edinburgh Medical Journal*, March 1878.)  
 On Cerebral Symptoms of Cardiac Origin in the Decline of Acute Articular Rheumatism. By Dr. Ch. Lugens. (*Revue Médicale de l'Est*, March 1878.)  
 On Common Chorea in old Persons. By M. Charcot. (*Le Progrès Médical*, March 9.)  
 Geographical Distribution of Pulmonary Phthisis. (*Gaz. des Hôpitaux*, March 30.)  
 On the Difficulties of Diagnoses of Pulmonary Tuberculosis. By Dr. Brochin. (*Gaz. des Hôpitaux*, March 30.)  
 On the Causes of Death from Chloroform, and the means of preventing it. By Dr. Boeckel. (*Gazette Médicale de Strasbourg*, April 1.)  
 Aneurism of the Aorta, with Perforation of the Sternum. By Dr. Roth. (*Gazette Médicale de Strasbourg*, April 1.)  
 First Type of Anæmo-spasmodic Bellows-sound of the Pulmonary Artery, generally termed Anæmic Bruit of the Base of the Heart. By Dr. Constantin Paul. (*L'Union Médicale*, March 19.)  
 On Acute Pneumonia and Neuritis of the Pneumogastric Nerve. By Dr. C. Fernet. (*La France Médicale*, March 20.)

On some Points in the Clinical History of Chorea. By Dr. W. R. Gowrs. (*British Medical Journal*, March 30 and April 6.)  
 Lectures on some Points connected with Diabetes. By Dr. F. W. Pavy. (*The Lancet*, March 30 and April 6.)  
 Notes on some Forms of Spinal Rheumatism. By Dr. E. Vallin. (*L'Union Médicale*, March 28.)  
 Suppurating Cerebro-spinal Meningitis. By Dr. Hutinel. (*La France Médicale*, March 27.)  
 On the Prognostic Value of the Pulse in Reference to the Temperature in some Terminations of Pneumonia. By Dr. A. Belugon. (*Montpellier Médical*, March 1878.)

## SURGERY.

SCHÜLLER ON A CASE OF UNUNITED FRACTURE.—In the *Deutsche Medicinische Wochenschrift*, March 2, 1878, Dr. Max Schüller of Greifswald relates a case of subperiosteal resection, with subsequent suture of the periosteum, on account of an ununited fracture produced by interposition of a tendon between the fragments.

Dr. Schüller observes that the employment of antiseptic precautions must materially change the opinions formerly entertained as to the danger of resecting the ends of the fragments in ununited fracture. Hence, of late years, we find this mode of treatment very frequently resorted to, amongst others by Volkmann, Bardeleben, and Langenbeck. The value of this method of treating false joint, as compared with the many others from time to time practised is, the author considers, yet to be determined. As a partial solution of the question, Dr. Schüller has published this case.

Frau H., 40 years of age, a healthy vigorous woman, sustained a fracture of the leg from the wheel of a heavily laden wagon passing over it. Gypsum bandages were immediately applied, but, after eight weeks' treatment, no consolidation had taken place, and no formation of callus could be felt. A fresh trial of plaster of Paris bandage was now made, and a three per cent. solution of carbolic acid was injected from a hypodermic syringe near the seat of fracture; a plan recommended of late years by Professor Hueter for the treatment of cases of delayed or non-union. Six months were consumed in various trials, and, at the end, there was not the slightest degree of union. An operation was then decided upon. A careful examination showed a marked interval between the fragments, so that pegging was not thought suitable. An incision, two and a half inches long, was therefore made, the seat of fracture exposed, and the periosteum raised from the ends of the bone, which were rounded, while between them passed the tendinous termination of the tibialis anticus muscle. There was not a trace of bone-proliferation. The muscle was now restored to its proper position, and the ends of the bones cut off, partly with the saw, and partly with the chisel, to the extent of a centimètre from each. After forcible traction, the fresh surfaces of bone could be accurately adjusted together, the fibrous connection of the broken ends of the fibula being divided simply with the knife, but the bone not otherwise interfered with. As the fragments of the tibia showed no tendency to separate, ivory pegging, or silver-wire suture, was not employed, but the carefully preserved periosteum was accurately united by fine catgut sutures, a small opening only being left to allow a fine drainage-tube to pass between the bones. Another and larger drain was passed outside the periosteum, and through a counter-opening made in the calf. The skin-wound was now sutured with catgut, the limb enve-

loped with salicilised jute, and a gypsum bandage, reaching over the knee, was applied. The whole operation was performed with strict antiseptic precautions. Except the day afterwards, when the temperature rose to  $38.5^{\circ}$  C. ( $101.3^{\circ}$  F.), there was never any fever. The whole dressing, plaster of Paris bandage included, was changed every few days at first; then a window was made in the plaster, and the dressings of the wound alone renewed. The external wound healed by first intention, but a slight discharge continued for a long time from the interior. A small fragment of bone subsequently exfoliated, and then immediate and thorough healing followed; and, at the end of four months, complete consolidation had taken place, in good position, and with a shortening of only half a centimètre at the outside. The author preserved the periosteum in this case with the greatest care, believing it has the chief part in the act of union, the endosteum somewhat less, and the bone-substance proper very little. The plan of pegging, he considers, has its principal result in fixing the fragments. He believes little in its power of exciting proliferation of bone when employed under antiseptic precautions, which accounts, in his opinion, for several recent failures of this method. In cases, therefore, where resection of the ends of the bone is indicated, he would perform the operation subperiosteally, accurately unite the margins of the divided periosteum, and only use pegs where necessary to maintain the fragments in apposition, and at rest.

WILLIAM MAC CORMAC.

DUPLAY ON A CASE OF CONTUSION OF THE ABDOMEN FOLLOWED BY LOCALISED PERITONITIS AND ENCYSTED DROPSY.—In the *Archives Générales de Médecine* for January last, M. Duplay reports the following case.

A strong and healthy man, aged 30, was received into the Hospital Saint Louis, June 2, 1877, having an hour previously received a violent blow in the right hypochondriac region, from the pole of a heavily laden cart drawn by two horses. The patient complained of slight pain in the injured part, but there was no redness, ecchymosis, or distension of the abdomen to be seen. Next day, the patient was attacked with severe peritonitis; from this a recovery eventually took place. At the commencement of July, the right side of the belly seemed to be larger than the left, and the percussion-note was not so clear as upon the opposite side. Cupping was tried at the affected part, but the physical signs increased and were accompanied by constipation. Expansion could now be felt with every movement, but no bruit could be heard on auscultation. By varying the position of the patient, no displacement of the fluid was effected. The absolute dulness that was present at the level of the tumour disappeared at its circumference. The fluid increased in amount, and caused pain and embarrassment of breathing.

On August 6, the swelling was aspirated, and two litres ( $1\frac{1}{2}$  pint) of ascitic fluid were drawn off. An analysis showed this to contain a considerable amount of albumen, some leucocytes, altered red blood-corpuscles, and large epithelial cells. Considerable relief followed the puncture, but, towards the end of the month, the swelling again appeared in the same position. As the fluid increased in amount, the pain became more severe.

On September 25, M. Duplay introduced an ordinary trocar at the spot where aspiration had been practised, and drew off  $2\frac{1}{2}$  litres of a liquid similar to that evacuated on the previous occasion. After



having washed out the cavity with some lukewarm water, 40 grammes of pure tincture of iodine were injected. This caused acute pain in the swelling, and all over the abdomen, continuing for four or five hours. The injection was followed by slight inflammatory symptoms, lasting a few days. On the fourth day after the operation, it was found that a small quantity of the fluid had been reproduced in the cyst, but this daily diminished; the fluctuation and pain disappeared, the appetite returned, and the patient was dismissed cured, December 15.

M. Duplay makes the following remarks.

The formation of an encysted dropsy of the abdomen after an injury is so rare, that I have not been able to find another example recorded in the classical authors. The patient, who was the subject of the preceding observations, had received a violent contusion on the right side of the abdomen without any indication of visceral lesion, either of the liver, kidney, or intestines, and in about 24 hours an acute attack of peritonitis was developed, which gradually terminated in resolution. Nevertheless, this acute attack was soon followed by a circumscribed swelling, which gradually increased, until, by its volume, it caused severe functional disturbances. By physical signs the swelling was recognised as being produced by a collection of liquid, and a puncture gave vent to two litres of a citrinous fluid, which was quickly reproduced and occasioned anew the same functional troubles. This liquid collection was evidently situated in the peritoneal cavity. Was it due to the transformation of extravasated blood, or was it a simple consequence of peritonitis following the injury? These two hypotheses may be raised, and it is probable that both may have contributed to the origin of the affection.

Although the injured man did not present after the accident any evident sign of extravasation of blood into the abdomen, there is but little likelihood that such a severe contusion would not give rise to more or less bloody effusion at the point of injury; and, besides, the symptoms of the peritonitis, which declared themselves next day, and particularly the distension of the belly, were of a sufficient nature to mask the signs of the effusion. Then it is right to recall the fact, that the examination of the fluid extracted by the first puncture, demonstrated the presence of a certain quantity of altered blood-corpuscles. This question is of minor importance; for, if it be sufficiently established that at the commencement there was an extravasation of blood, it is certain that this was not abundant, and that the serous collection observed later could not be considered as a simple transformation of effused blood.

The peritoneum here played the principal part. It is this which formed a circumscribed cavity around a small quantity of effused blood and the products of an inflammatory secretion; which cavity had probably its walls lined by a membrane, giving rise to a continuous morbid exudation. This accidental cavity was evidently formed on one side by the parietal layer of the peritoneum, and, on the other, by the great omentum or the agglutinated folds of the intestines, lined by a false membrane, and bounded at its periphery by the adhesion of the great omentum, or the intestinal folds, to the parietal peritoneum. The examination before and after the puncture, the exploration of the abdomen after recovery, left no doubt relative to the situation of the cyst in the interior of the abdominal cavity, and of the part taken by the epiploon, and probably also by the intestines, in the formation of the cyst. Thus

constituted—that is to say, the morbid secretion being present—there would be a constant tendency to increase in quantity and incessantly to reproduce. Believing that I ought to act in this case as in other encysted serous collections, I did not hesitate to practice an injection of iodine, which has been followed by a complete recovery, although at the commencement there were some inflammatory symptoms, but not of a grave nature.

T. F. CHAVASSE, M.B.

MANDELBAUM ON THE TREATMENT OF ULCERS.—Dr. Mandelbaum of Odessa remarks (*Berl. Klin. Wochenschrift*, March 11) that, after trying in vain all the usual methods of treatment in ulcers, he found ulcerations of all kinds and in all situations yield to the treatment by means of the scraper (of Hebra), iodoform, and equal parts of mercurial and soap plasters. If the ulcer be very deep, the destruction of tissue considerable, and the edges jagged, callous or indurated, it is first thoroughly cleansed with the scraper down to the sound base. This is then daily covered with a thick layer of iodoform until healthy granulations form; and they invariably do form. Then, when the sore has filled in, and its base risen to the level of the surrounding skin, it is dressed with equal parts of mercurial and soap plaster spread evenly on soft linen. If the ulceration be less severe and only covered with a thick layer of pus, iodoform alone, without previous scraping, is sufficient to produce healthy granulations. This treatment has, in Dr. Mandelbaum's hands, cured ulcers of all kinds, and which had resisted for many years all other means.

KNAUTH ON A CASE OF TRAUMATIC RESECTION OF THE SCAPULA.—Dr. Knauth reports (*Berliner Klinische Wochenschrift*, March 18th) the case of a boy 10 years of age who was seized on the 22nd of February last by the fly-wheel of a chaff-cutting machine. The knife of the machine cut through the soft parts under the scapula, and also through the neck of that bone itself behind the coracoid process. The entrance wound was about seven inches long, the wound of exit about five inches. The edges of the wounds were stitched together, and carbolic acid dressings applied. For three days the patient's condition remained satisfactory, but then gangrene set in, and, in six days, destroyed the soft parts, laying the scapula almost bare. The bone was easily removed, and, under carbolic acid dressings, the wound healed kindly, accompanied by but little fever, and a rise in temperature to 103.6° F., leaving an extensive cicatrix and an open sore of the size of a five-shilling piece, which may require a plastic operation for its complete closure. The extent to which the movements of the arm may be affected by so great an injury, cannot yet be determined.

W. J. TREUTLER, M.B.

JONES ON THE MECHANISM OF THE SPONTANEOUS ARREST OF BLEEDING FROM WOUNDED VESSELS.—Mr. Wharton Jones has, in some of the later numbers of the *Lancet* (pp. 341 and 376), given the results of his experiments and observations upon this subject; the white rabbit's ear and bat's wing, as well as the frog's web, being the subjects of his experiments. An artery divided did not at once bleed, the column of blood disappearing in the vessels; but soon the red column reappeared, and blood flowed pretty freely from the cardiac end. In a minute or two it ceased, and the column of blood in the divided artery became conical at its base nearest the heart.

The observations and experiments made showed that from small arteries, when divided, no blood at all may escape, and that this is, in the first instance, owing to the contraction of the muscular walls of the vessels excited by the irritation of the injury, whereby its canal is closed to some extent, both above and below the wound. And though soon after this both segments of the artery again become dilated, the retracted mouths continue constricted, and the surrounding tissue of their sheaths is so much closed in around them that blood is prevented from escaping, while, the collateral branches having become dilated, the stream of blood—direct in the upper segment, retrograde in the lower—is at the same time diverted away from the mouths of the divided trunk.

In wounds of larger vessels, the ends retract within the sheath by virtue of their longitudinal fibres, the circular layers contracting the open mouths, but in a less ratio than is found in the smaller arteries; hence the formation of an outer clot plays a more important part in arresting hæmorrhage from large vessels. This external clot is thus formed: the blood, coagulating, adheres to the wall of the sheath within which the retracted ends lie, and soon, the sheath being filled, the hæmorrhage ceases. The irregularities of the surface of the sheath favour the formation of this external clot, which is further aided by faintness should it be induced by loss of blood. An internal clot is also formed; the bleeding being arrested by the external clot, the internal coagulum not contributing to this result. Between the external and internal clots, lymph is exuded and constitutes what is called the middle or "lymph-clot". It is by aid of this clot that the mouth of the divided artery is permanently closed, although it is certain that the internal clot becomes also organised. From the junction of the base of the internal clot with the lymph-clot upwards, adhesions form with the walls of the vessel. New vessels are formed in the lymph-clot, in the bands of adhesion between the walls of the vessel and the internal clot, as also in the interstices of the internal clot itself. Eventually the walls of the vessel and the internal clot, together with the lymph-clot, are metamorphosed into a solid cord of cellular tissue.

If a vein be divided, the bleeding is arrested by means of an external clot, in a somewhat similar manner to that from a divided artery.

**SPANTON ON TENDON-LIGATURES.**—Under this title, Mr. Spanton draws attention to the value of tendons from various animals for the purpose of ligaturing arteries (*Lancet*, March 9, 1878, p. 370), and while referring to Mr. Callender's remarks at the Clinical Society, as reported in the *Lancet*, Feb. 16, 1878, p. 239, upon the value of "Tendon Ligatures" from the kangaroo's tail, and also from the tails of horses, draws attention to Mr. Garner's paper read before the Staffordshire Branch of the British Medical Association, and reported in the *British Medical Journal* for December 23, 1876. Experimental observations proved that tendon ligatures deserve a more extended trial than has hitherto been given them, for it was found in Mr. Spanton's cases that the advantages of tendons are, great strength, a secure knot, and early solution.

[In the *Monthly Journal* for March 1849, as abstracted in Ranking's *Abstract*, vol. ix, p. 290, will be found a communication upon this subject by Mr. Wragg. He prefers the fibrous tissue of the deer, dried, then twisted so as to form small round threads, smooth and regular on the surface, and non-elastic,

sufficiently strong to resist traction in tying the knot. If the tendons have been dried for years they are improved. Surgeons, at the date of Mr. Wragg's communication, doubted whether these tendons could be absorbed and disappear among the tissues; but, during ten years, Mr. Wragg had used them in all situations, and never saw reason to suppose the knot had not been absorbed.—*Rep.*]

**HARRISON ON URETHRAL FEVER.**—Mr. Reginald Harrison, in the *Lancet*, March 16, 1878, has a clinical lecture upon the above subject, with details of a well-marked case, where for several days the patient's life was in jeopardy. For three weeks, gradual dilatation had been practised, and then a Holt's dilator was attempted to be passed, but failed, and no great force was employed; but, four hours subsequently rigors commenced, the temperature rose, vomiting set in, and the urinary secretion markedly diminished. For four days the patient was semicomatose, and this continued until the secretion of the kidneys became normal in quantity.

In this case, the effect produced upon the kidneys was remarkable, more especially as they were quite free from organic disease. For fifty-one hours and a half no urine was secreted, and then only four ounces. During the next 24 hours two ounces were passed, and gradually the quantity became normal.

Symptoms like the above are evidently due to shock propagated by the sympathetic system, and never arise after urethral operations performed under the influence of anæsthetics. The value of Mr. Long's treatment by tincture of aconite to prevent rigors is insisted upon, and also the use of quinine in doses of five or ten grains. Infusion of digitalis in small and frequent doses, to secure renewal of the function of the kidney, is strongly commended.

**MACKENZIE ON A CASE OF SCALD OF THE MOUTH, WITH DIPHThERIC SYMPTOMS.**—A case of scald presenting some difficulties in diagnosis is reported by Dr. S. Mackenzie in the *Medical Times and Gazette*, March 9, 1878. An emaciated woman, aged 31, was admitted to hospital three days after having drunk soup so hot as to cause discomfort about the throat, to relieve which she swallowed a quart of brandy, neat. The angles of the mouth and cheeks were livid and vesicated, and internally scraps of sloughing membrane covered the tongue and pharynx. Laryngoscopic observation showed deep congestion of the larynx. Phonation was good; there was no dyspnoea; no stridor; she swallowed milk easily. The mental state was peculiar; there was great hebetude. Temperature 100°; urine 1010, acid, albumen one-tenth. After a fortnight the patient looked cheerful; the pulse was small; she felt well, and wished to go home. The buccal and pharyngeal membranes were red and ecchymotic. The case presented several peculiarities which are, perhaps, most easily explained by supposing that diphtheria supervened upon a scalded throat.

RICHARD NEALE, M.D.

**BONA ON CIRCUMCISION BY THE GALVANIC CAUTERY.**—Dr. Bona relates three cases in No. 20 of *L'Indépendante* for 1877.

A boy, aged 6, had a tumour of the size of a nut, formed of the gland and prepuce, which had undergone degeneration, and were fused into a single body. Dr. Bona diagnosed lardaceous degeneration of the prepuce, with adherence to the glans—the result of a foul ulcer of several months' standing. With the galvanic cautery a clear section was made



compressing almost the whole of the charged prepuce without the loss of a drop of blood, and with but little pain. Water dressing was subsequently applied; there was no constitutional reaction, and the patient was soon well.

In the second case, a child, aged 7, had oedematous phimosis and urethral fistulæ at the base of his penis, in consequence of two of his companions having tightly tied a stout hempen thread round the organ. In consequence of the obstruction presented by the phimosis to the passage of a catheter, which was necessary for the treatment of the fistulæ, Dr. Bona performed circumcision by the galvanic cautery, with but little pain, and with no hæmorrhage, removing more than a centimetre (0.4 inch) of the prepuce.

The third case was one of congenital phimosis. A centimetre of the prepuce was removed by the galvanic cautery, with a successful result.

ZEISSL ON TRANSMISSION OF SYPHILIS BY A BITE.—In the *Allgemeine Wiener Medizin. Zeitung* for January 8, Dr. Zeissl reports a case in which syphilis was communicated otherwise than through the genital organs. A joiner, aged 28, was admitted on October 9, 1876, into the syphilitic department of the General Hospital in Vienna, having suffered from syphilis for eight weeks. The genitals were perfectly free from signs of specific lesion, present or past, and the neighbouring lymphatic glands were unaffected. The patient had, on the surface of the body, numerous brownish cicatricial depressions, evidently the results of a pustular syphilide. On further examination, the dorsal aspect of the left thumb, over the metacarpo-phalangeal articulation, showed a depressed, still partly infiltrated, hard, hyperæmic, irregular cicatrix as large as a bean. In this part, he said, he had been bitten on June 4 by a drunken companion, in an attempt to prevent him from making a noise in the street, by placing his hand over his mouth. The wound had healed readily, but broken out again spontaneously four weeks after healing. The epitrochlear gland of the left arm was still markedly enlarged at the time when the patient was seen; that of the other arm was normal. It was proved that the man who inflicted the bite had a syphilitic sore of the mouth. Tincture of iodine was given internally, but, on October 11, he complained of severe cough; and, on examination, infiltration of the apex of the right lung was detected. The iodine was stopped, cod-liver oil was administered, and mercurial inunction employed. After twelve inunctions, the patient was, on October 24, apparently nearly cured of the syphilis, and was transferred to the medical wards, to be treated for tubercle.

A. HENRY, M.D.

HARDAWAY ON EXCISION OF INDURATED LYMPHATIC GLANDS.—In a paper read before the American Dermatological Association (*New York Medical Journal*, December 1877), Dr. W. A. Hardaway, of St. Louis, expresses the opinion that early extirpation of the sclerosed glands, contiguous to the initial induration, when they exist in places accessible to surgical interference, would in some instances serve to avert constitutional disease, and be as legitimate an operation as excision of the chancre itself. He bases this opinion upon the belief that the syphilitic virus is not absorbed by the blood, but is taken up by the lymphatic vessels, carried to the glands nearest the point of initial lesion, and, after there undergoing a period of localisation for a variable length of time, is thence dispersed into the general circulation; and that, therefore, syphilis is never *ab initio*, but only

secondarily a blood-affection. He gives many cases tending to prove that the secretions of hard chancres and of secondary lesions will produce either hard sores, followed by general infection, or soft sores not so followed, these varying conditions being dependent upon the natural tendency to pus formation in persons free from syphilis; on the well known aptitude to pus formation in persons having syphilis; and on the almost certainty, when the purulent secretions of irritated syphilitic lesions are used, of causing soft sores, although in some cases, when such secretions are employed, certain of the sores thus produced may be soft, and others on the same person hard, or first soft and later becoming indurated (mixed chancre).

MAURIAC ON SYPHILITIC INTERSTITIAL GLOS-SITIS.—Dr. C. Mauriac has published an account of this affection (*Le Progrès Médical*, 1877, No. 45). The affection is in character similar to syphilitic sarcocoele, and consists of an inflammatory induration of the fibrous partitions separating the muscular fasciculi of the tongue. It begins always on the dorsal surface, at first being superficial, and then invading the deeper tissues. It is more frequently met with in men than in women. There appear to be a hypertrophic and an atrophic period. In the former the enlarged, hard, and painful tongue presents on the dorsal aspect hollow furrows filled with macerated epithelium. There are noticed large papillæ, and often ulcerations, at the points where the tongue touches the teeth, or in the bottom of the above-mentioned furrows. The second stage is that of retraction of the new tissue, and then there is a deep antero-posterior fissure, with several irregular fissures. Finally, as atrophy progresses, the organ becomes smooth and shining, is divided into little lobules, and gives the sensation of a tongue made of wood. Specific treatment is seemingly of some service in the early stages, but is entirely useless when the disease is advanced.

SCHUSTER AND SANGER ON SYPHILITIC DISEASE OF THE NOSE.—In the *Vierteljahrsschrift für Dermatologie und Syphilis*, Band iv, Heft 1 and 2, Schuster and Sanger recommend the use of the scraping spoon for the removal of syphilitic growths of the nasal cavity, to prevent falling in, and to arrest the disease process. Even perforation of the palate by scraping is at times the lesser of two evils. Artificial illumination should be used. Pathologically the conditions existing vary. There may be—1, simple syphilitic infiltration, the mucous membrane not hypertrophied, with or without alteration of the glands, capillaries, or epithelium; 2, the same, with hypertrophy of the mucous membrane and constriction of the dilated capillaries, by means of cell-growth, or, without this, a fact favouring the views of Auspitz and Unna, upon the anatomy of the initial induration, namely, that the vessels remain, as a rule, unobliterated; 3, more severe infiltration of the mucous membrane, passing into syphiloma; 4, syphilomata of the mucous membrane or condylomata. The subjacent bones and cartilages may show either necrosis with exfoliation, absorbent inflammation, without loss of the mucous membrane, or plastic osteitis, with the production of spindle-cells and connective tissue, passing into bony formations.

The practical points are these. 1. Whereas ulceration of the mucous membrane has been held by writers to be the sole cause of ulceration of the bone and cartilage of the nose this need not be the case. That membrane may remain uninjured while the

subjacent tissues undergo changes like those of the tibia or frontal bone. 2. A healthy mucous membrane may be caused to ulcerate by mechanical interference, and then this ulceration may extend to the bones, or the disease in subjacent bones pass over to the injured membrane.

MORTON ON A CASE OF ELEPHANTIASIS ARABUM TREATED BY DIVISION OF THE SCIATIC NERVE.—The *Philadelphia Medical Times*, of January 19, records a case in which Dr. T. G. Morton has treated elephantiasis Arabum by a new plan; namely, by nerve-section.

The patient, a coloured man, aged 34, was admitted to the Pennsylvania Hospital in December 1873, with elephantiasis affecting the right leg. On the twelfth day from his admission Dr. Morton tied the right femoral artery, and, after the removal of the ligature and the healing of the operation-wound, a compressive bandage was applied for some time. In March 1874, the patient was discharged much improved. The limb, however, again enlarged; and he was readmitted to the hospital on November 9, 1877. The right leg was now twenty-one inches in circumference.

Having noticed the frequency with which operations for nerve-section are followed by atrophy of the parts supplied by the nerve which is cut, Dr. Morton determined to attempt the artificial production of atrophy of the right lower extremity by section of the motor nerve of that limb. Accordingly, on November 17, the right sciatic nerve was laid bare, and one and one-half inches of its length excised at the upper third of the thigh. No unpleasant symptoms occurred since the operation incident to the section. There was a steady diminution in the size of the limb ever since. On January 3, it was found to be but twelve and one-half inches in circumference, a reduction in circumference of eight and one-half inches.

An interesting feature in the case has been the desquamation of all the thick skin which covered the limb from the knee to the ankle and foot, especially about the lower third of the leg. Patches of the skin, one-sixteenth of an inch thick, have peeled off from time to time, leaving a perfectly clean, soft, and pliable skin beneath. There has not been the least disposition on the part of the skin to ulcerate, and the lost sensibility is confined to the extreme anterior portion of the dorsum, all of the sole of the foot, and a strip of integument running directly up the posterior part of the leg to about the middle point between the heel and the popliteal space. This strip is about two inches in width. On all portions of the leg, except this anæsthetic strip, the patient is able to distinguish between the compass-points, provided they are held at a distance not less than an inch apart. This shows that the sensibility of the larger part of the limb operated upon has been but very slightly impaired. The man has suffered from a severe attack of pleuro-pneumonia since section was performed, but this was in no wise an effect of the operation.

HAMILTON ON SPONTANEOUS AMPUTATION OF A GANGRENOUS LEG AT THE KNEE-JOINT UNDER HOT WATER TREATMENT.—In the *Archives of Clinical Surgery* for February, Dr. F. H. Hamilton, of the Bellevue Hospital in New York, reports the following case.

On December 18, 1877, John Meagher, aged about 25, a switchman on the Long Island Railroad, was

run over by two platform cars. During three days, he remained under the care of a physician to submit to amputation. On December 21 he was admitted into hospital. The right thigh had suffered a severe laceration just above the knee, the wound being about ten inches long, and closed by sutures. It emitted a strong gangrenous odour. On removing the sutures, the underlying structures were found extensively contused, the bone bare, and the wound filled with masses of undetached gangrenous tissue. His left thigh was broken about three inches above the knee, the upper fragment penetrating the joint. The whole limb was cold, swollen, discoloured, emphysematous, and pulseless.

His condition did not warrant an amputation. A long splint was laid beside the broken limb and secured by bandages, heat was applied to the extremities, a weak solution of carbolic acid was employed to correct the fetor, and nourishment with stimulants was administered.

On the following day his mind was more clear, but he was still very feeble, and the gangrene was extending in both limbs. Amputation was advised, but the parents refused their consent. On December 23 the gangrene in the left leg involved the whole limb as high as the knee, and discoloration extended as high as the groin. The entire left leg and thigh were now enveloped in cotton-batting, saturated with water at about the temperature of 110° Fahr., and the laceration on the right thigh was treated in the same manner. Outside of the cotton-batting each limb was enclosed in oiled silk, and the patient was placed on a sheet of oil-cloth. The hot water was renewed every twenty or thirty minutes, day and night.

On December 25 the discoloration had nearly disappeared from the left thigh, above the fracture. A line of demarcation was forming at the knee-joint. Delirium was abating; he began to take food, and rested well.

On January 6, 1878, nineteen days after the receipt of the injury, and thirteen days after the commencement of the hot water treatment the separation at the left knee-joint was so nearly completed that with scissors Dr. Hamilton cut the remaining sloughy bands, and removed the leg, without inflicting pain and causing the loss of only a few drops of blood. The gangrenous slough had already separated from the opposite thigh.

On February 8 the patient was gaining strength; the wounds were healing on the right limb. The lower fragment of the left femur was projecting, and the necrosed extremity of the bone was gradually separating from the shaft; the lower fragment, about four inches, including the articular surface, was dead, but still hanging by two bands of living soft tissue. Granulations were healthy and cicatrization was progressing. Water dressings were discontinued when the leg separated, balsam of Peru being substituted. His final and complete recovery was assured.

This is not the first time that Dr. Hamilton has obtained a similar result from this plan of treatment, and while he is not prepared to say that it will always prove successful in arresting traumatic gangrene, and in securing a prompt separation of the dead parts, he considers that the method always deserves a trial when amputation cannot safely be practised. From the second or third day after the commencement of the hot water applications, there was almost no apparent constitutional disturbance. The patient took no medicines.



An excellent paper on this subject of hot water in surgery has been written by Dr. Frederick E. Hyde, of New York, and published in the *Buffalo Medical Journal* for December 1875. In this paper five cases are examples of gangrene which were under Dr. Hamilton's treatment, and which were arrested by hot water, and resulted in spontaneous amputation and a cure.

FORD ON AMPUTATION OF THE RECTUM.—Dr. Huston Ford, of St. Louis, read before the Medical Society of that place an account of a successful operation for the removal of a prolapsed rectum (*St. Louis Medical and Surgical Journal*, January 1878). The prolapse had existed about two years, and at the time of operation measured from four to four and a half inches in length, and two and three-quarter inches in diameter at its base. The exposed mucous surface was covered with a glairy secretion, but, in spite of this protection, extensive ulcerations had occurred. The case was not a promising one, but, as surgical interference alone promised any results, it was undertaken. Two operations were performed. At the first, four folds of mucous membrane were tied, the mass returned to the cavity of the pelvis, and four wide strips of flabby integument removed from the margin of the anus. For a month, while the patient remained in the recumbent position, the prolapse did not return; but, as soon as he was allowed to go to the water-closet, the straining caused the young cicatricial tissue to yield, and the operation proved a total failure. At the next operation, ligatures were passed, by a species of transfixion, so as to completely constrict the prolapsed tissue, without closing the lumen of the gut. The strangulation, however, was not complete, and two days afterwards it was found necessary to apply eleven elastic ligatures. These answered the purpose, and five days later the sphacelous mass was removed. During this proceeding the straining of the patient forced a mass of intestines through the end of the stump. This was returned with considerable difficulty, and the rent securely stitched. Two weeks later there was a prolapsed portion of bowel, quite healthy in appearance, about half the size of a hen's egg. The site of the intestinal extrusion had soundly healed. There had been no rise of temperature. Within two days the small prolapse had returned spontaneously, and had not reappeared, although two months had passed up to the time of writing. About nine inches of gut were removed, which probably included the entire rectum. Dr. Ford thinks there is not much danger in the operation, and in similar inveterate cases it may be practised with impunity.

SIMMONS ON EXCISION OF THE HUMAN SPLEEN FOR HYPERTROPHY.—Dr. G. B. Simmons read before the Sacramento Society for Medical Improvement, an account of the first case of splenotomy reported in America (*Pacific Medical and Surgical Journal*, Dec. 1877.) In searching the literature of this operation, he found but fifteen cases; the first was by Zuccarelli in 1544, and was said to have been successful. Since then there have been but two successful cases, both of which were operated upon by M. Péan of Paris. The patient on whom Dr. Simmons operated was under observation for nearly three years, but during this time the progressive growth of the tumour seemed to be in no way affected by any of the many plans of treatment which had been suggested and tried. At this time he demanded operative interference, and splenotomy was

accordingly performed on June 6, 1877. The incision was made in the abdominal wall near the linea alba, from four inches above to four inches below the umbilicus. There was some fluid in the abdominal cavity, and some recent adhesions to the intestine which were slowly separated, and the bleeding points secured by fine carbolised ligatures. The organ was then turned out, and strong adhesions to the diaphragm were found, which occasioned some difficulty. The pedicle and gastro-splenic omentum, including the larger vessels, were ligatured in sections; the ligatures were cut close and returned. The final removal of the organ was affected without allowing any blood from the incised splenic vessels to enter the cavity. The ascitic fluid was sponged out, and, as there seemed to be some slight oozing, a drainage-tube was inserted into the lower end of the wound, the incision closed by sutures, and dressings applied as usual after abdominal section. He recovered well from the effects of the ether, but soon began to retch and vomit, and these efforts were followed by flow of bloody fluid through the tube. In spite of all endeavours, he gradually sank, and died from hæmorrhage two hours and a half after the completion of the operation. No *post mortem* examination was obtained.

MORRIS ON DIVISION OF THE TENDO ACHILLIS IN FRACTURE OF THE LOWER END OF THE FEMUR.—In fracture of the lower third of the femur Dr. M. A. Morris, of Harvard, Charlestown, alleges (*Boston Medical and Surgical Journal*, November 1877) that the tendency of the lower fragment to tilt backward into the popliteal space is caused by the contractions of the muscles arising from the condyles of the femur, and is exaggerated by the forced extension which is so very generally employed in the treatment of these fractures. Dr. Morris overcame this tendency to displacement by division of the tendo Achillis, as recommended by Mr. Bryant in his work on Surgery. In this case the fracture was situated about two inches and a half or three inches above the articular extremity, its direction being upwards and backwards; there was also a longitudinal fracture separating the condyles, which were freely movable. When extension was made, the upper extremities of the lower fragments projected backwards, and could not be kept in position, it being believed that this was caused in great part by action of the gastrocnemius muscle, the tendo Achillis was divided, and the deformity did not recur. The case was then treated in the ordinary manner, and the patient made a good recovery. The advantages of this procedure are stated to be, that it renders possible a better position, thereby accelerating union, and it lessens the liability to shortening, protracted confinement to bed, and ankylosis.

#### RECENT PAPERS.

- Stricture of the Oesophagus. By Dr. Chappet. (*Lyon Médical*, March 31.)
- Commotion or Contusion of the Spinal Cord followed by Recovery. By Dr. J. Grasset. (*Montpellier Médical*, March.)
- Two Strangulated Herniæ; Reduction by Esmarch's Apparatus. By M. Guillaud. (*L'Année Médicale*, March 1878.)
- Fistula of the Anus of four years' standing; Contraction of the Sphincters: Operation; Cure. By Dr. Notta. (*Ibid.*)
- Ligature of the Left Common Carotid Artery. By Dr. G. Mancini. (*Lo Sperimentale*, March 1878.)
- On Narrowing of the Larynx by Membranous Cicatrices after Syphilis. By Dr. J. Sommerbrodt. (*Berliner Klinische Wochenschrift*, April 1, 1878.)
- Foreign Bodies in the Urethra and Bladder, and their Removal. By Dr. Weinlechner. (*Wiener Medizin. Wochenschrift*, March 23 and 30.)

Rheumatic Osteo-periostitis of the Anterior Tuberosity of the Tibia in Young Persons. By Dr. Archambault. (*La France Médicale*, March 30.)

On the Treatment of Cancers and Adenomata of the Breast by Ischæmia of the Mammary Gland by means of India-rubber. By E. Bouchut. (*Le Mouvement Médical*, March 16.)

Calculus in the Submaxillary Gland. By Dr. Bertin. (*L'Union Médicale*, March 9.)

Terebene as a Dressing for Wounds. By Mr. T. G. Nasmyth. (*Edinburgh Medical Journal*, March.)

The Reason why Varices of the Lower Limbs affect the lesser Vena Saphena much less frequently than the great Saphena. By H. Chrétien. (*Revue Médicale de l'Est*, March 1.)

Staphylophary and Urethroplasty. By M. Trélat. (*Le Progrès Médical*, March 23.)

Strangulated Femoral Hernia of Unusual Form; successful Operation. By Dr. Brochin. (*Gazette des Hôpitaux*, March 23.)

On Sponges as Surgical Dressings, and Terebene as a Surgical Agent. By Mr. F. Jordan. (*British Medical Journal*, March 30.)

On Foreign Bodies in the Oesophagus. By Dr. Volland. (*Deutsche Medicin. Wochenschrift*, March 9 and 16.)

On Ozæna. By Dr. A. Hartmann. (*Ibid.*, March 30.)

Lateral Cystotomy with Ciniselli's Sound. By Dr. V. Omboni. (*Annali Universali di Medicina e Chirurgia*, March 1878.)

## MATERIA MEDICA AND THERAPEUTICS.

TEMPESTI ON THE USE OF CARBOLIC ACID IN TYPHOID FEVER.—In *Lo Sperimentale* for January, Dr. C. Tempesti relates two cases illustrative of the use of carbolic acid in enteric fever. They were observed during an epidemic of the disease which prevailed in 1875.

The first patient was a girl aged ten. The ordinary symptoms of the disease had been present several days, when in the course of the second week there appeared nocturnal delirium, epistaxis—often abundant, diarrhoea, depression, stupor, bronchial catarrh, sordes on the nostrils and teeth; and there was hæmorrhagic discharge from the gums, fauces, and tongue. Recourse was had to clysters of cold water and to painting the parts inside the mouth with a solution of 2 parts of carbolic acid in 100 of water; but the disease obstinately resisted all treatment. Dr. Tempesti then decided to give the patient the solution of carbolic acid as a drink; she took it with avidity, and in a few hours half a drachm of carbolic acid had been taken. The next day, all threatening symptoms had disappeared, and the patient asked for food. Half a drachm of carbolic acid was again given in solution; two weeks later the patient was convalescent, and soon completely recovered.

The second case also occurred in a girl aged 10, who was the subject of very severe typhoid fever with dissolution of the blood. The internal use of carbolic acid was prescribed; but through the prejudice of the friends the administration of half a drachm of the acid was spread over five days; hence the medicine was useless, and the child died.

Dr. Tempesti sums up in the following conclusions.

1. Carbolic acid may be a remedy of much value in cases of typhoid fever in which death is threatened (the putrid state of old writers), and is worthy of being subjected to clinical research.

2. The dose must be sufficiently high (half a drachm or a drachm daily in ordinary drink or in abundance of water). Small doses, perhaps in consequence of the nervous stupor which prevails in typhoid fever, are of little or no therapeutic efficacy.

CHIRONE AND PETRUCCI ON THE BIOLOGICAL ACTION OF SALICYLIC ACID AND SALICYLATE OF

SODA.—In the *Commentario Clinico di Pisa* for January and February, Drs. Chirone and Petrucci publish an account of a number of experiments made in the Pharmaceutical Laboratory of the University of Naples, on the action of salicylic acid and salicylate of soda on warm-blooded animals (dogs and rabbits), and cold-blooded animals (frogs). They sum up in the following conclusions. 1. The biological action of salicylic acid and of salicylate of soda is identical; but with the former the local effects, with the latter the general effects, are more marked. 2. Salicylic acid, both free and in the state of salicylate, when administered in small doses, lowers the temperature, but within restricted limits: in a somewhat large dose, it does not only not lower the temperature, but sometimes considerably increases it. 3. Animals subjected to the daily use of salicylic acid and salicylate of soda rapidly become emaciated and lose weight. 4. The heart-beats are in frogs reduced in number, especially by salicylate of soda; but in mammalia salicylate of soda sometimes retards, sometimes accelerates, the heart's action, independently of the dose. With free salicylic acid, the number of heart-beats is, in most, constantly reduced. 5. Salicylic acid almost constantly reduces the number of respirations; salicylate of soda ordinarily first increases and then diminishes the number.

SEMMOLA ON THE TREATMENT OF NERVOUS VOMITING BY ELECTRICITY.—In a letter to Dr. P. Schivardi, published in the *Gazzetta Medica Italiana-Lombarda*, No. 6, 1878, Dr. Semmola gives the results of observations made during several years on the diagnosis and treatment of nervous vomiting. He finds that electricity in the form of the constant current is the most effective remedy. Soon after the first application, the patients can retain food, although for many weeks previously they had always rejected it. He believes, also, that the constant current is not only a sure remedy, but also a valuable means of diagnosis in all cases of chronic vomiting. If the elements of diagnosis be not sufficient to determine whether the vomiting is dependent on some morbid process in the stomach itself, or in reflex action (as from worms or chronic uterine disease), the application of the current at once settles the question. In cases where the vomiting is not exclusively and primarily nervous, its application fails in enabling the stomach to tolerate food.

Dr. Semmola relates twenty cases in which a cure was produced by the means which he recommended. The last of them is as follows.

The daughter of Mr. C., a member of the Italian parliament, had been greatly reduced by vomiting which had lasted three months, and which was attributed by her medical attendants to perforating ulcer of the stomach. On the evening of November 14, 1875, she had a sudden attack of aphonia, and was believed to be at the point of death. Dr. Semmola was consulted for the first time. The aphonia led him to suspect hysteria. He was unable to see any vomited matter, as she had taken no food since the morning. He applied the current by means of Onimus' apparatus, and very soon afterwards the patient was able to take a cup of milk. On being questioned, she acknowledged that she had a sensation of constriction in the throat; and this confirmed his opinion that he had to deal with a case of hysterical neurosis. The constant current was applied between the sides of the neck and the larynx, and afterwards between the sides of the neck and the stomach. The application was repeated several



times daily; and in two months the cure was complete and permanent. A. HENRY, M.D.

**VINKHUYSEN ON QUINETUM AND ITS THERAPEUTICAL VALUE.**—In the *Practitioner* for February 1878, Dr. Vinkhuysen gives an able *resumé* of the uses and value of this agent. The name quinetum is applied to the collective alkaloids obtained from Peruvian bark. It has been employed by Dr. Vinkhuysen in a large number of cases with great advantage, and from these he draws the following conclusions. In pernicious fever, being less active than quinine, quinetum is not admissible. In all forms of malarious fever, it is equally useful with quinine, though slower in its action. It does not produce the same unpleasant effects that often result from the use of quinine. It never causes tinnitus aurium. In chronic cases, it appears to be more efficacious than quinine. The tonic action of quinetum is similar to, and perhaps even greater than, that of quinine. The action of quinine in cases of marked or larval malaria, and especially in rheumatic affections due to malarious influence, is incomparably greater than that of quinine. [MM. Delondre and A. Labarraque (*British and Foreign Medico-Chirurgical Rev.*, Feb. 1858), drew attention to the preparation and value of quinium, evidently the same preparation as quinetum. In the *Edinburgh Medical Journal*, Sept. 1873, Dr. Dougall published a paper on the value of quiniidia, cinchonidia, and cinchonia, the three alkaloids of Peruvian bark (see *London Medical Record*, Dec. 17, 1873); and Dr. Thorowgood, in the *Medical Times and Gazette*, Oct. 17, 1876, draws attention to the great value of quinetum as a tonic and antineuralgic remedy.—*Rep.*]

**GILL ON THE ACTION AND USES OF HYOSCYAMINE.**—Mr. Clifford Gill speaks favourably of this drug in the *Practitioner* of February 1878. The alkaloid must be very largely diluted, otherwise it produces great gastric disturbances. The solution must also be freshly made, otherwise it soon becomes inert. One-eighth to three-eighths of a grain in two ounces of water is the dose. In a severe complicated case of acute mania, hyoscyamine was the only drug that succeeded in inducing sleep, and cured the patient. Several other equally satisfactory results were obtained in different maniacal patients. Mr. Gill arrives at the following conclusions.

Some patients are very intolerant of the drug, and small doses produce very alarming results.

A noisy and dangerous lunatic can easily and certainly be rendered calm for some hours, and probably, though not certainly, unless the dose be increased, be sent into a profound sleep lasting many hours. The drug is not useful in acute delirious mania, and in the various forms of remittent mania. In melancholia, little or no good is gained.

The great value of the drug to general practitioners, who may be at any time called to furious lunatics in private practice, is self-evident. A dose of hyoscyamine will induce sleep, till the frightened and alarmed friends can adopt proper means for after-treatment. Degenerate arteries in old people, and chronic cardiac disease, are contraindications to its use.

[Dr. Oulmont (*Ranking's Abstract*, vol. vii, p. 143) gives a *resumé* of the value of hyoscyamine to a great extent confirmatory of Mr. Gill's observations; and a valuable paper by Dr. Pearse, in the *Lancet*, September 1876, gives details of observations upon the influence of the drug applied locally to the eye, where

its effects were found to resemble those of atropine. In the *Practitioner*, March 1877, Dr. Ringer and Mr. J. S. Bury contribute a valuable paper upon the effects of hyoscyamine employed in cases at the University College Hospital. Abstracts of some valuable papers on this subject (by Dr. Lawson), published in the *Practitioner* and *West Riding Asylum Reports*, were given in the *London Medical Record* for 1876 and 1877.—*Rep.*]

**KENNEDY ON CASES OF DIABETES INSIPIDUS SUCCESSFULLY TREATED.**—Dr. Henry Kennedy reports (*Practitioner*, February 1878) five cases of the above troublesome affection, which were either cured or greatly relieved by dilute nitric acid. Most writers upon polydipsia give a most gloomy picture as regards treatment, and Dr. Kennedy quotes Trousseau, Dickinson, and others, in support of this fact.

**CASE I.** A gentleman, aged forty-five, was cured by one drachm of dilute acid daily in eleven days, after having suffered for years.

**CASE II.** A lady, aged thirty-eight, was pronounced well at the end of five weeks. She had been ill for more than a year.

**CASE III.** A man, aged twenty-nine, was admitted into hospital, and drachm doses doing little good, the acid was increased to three, four, and finally five drachms, with great benefit.

**CASE IV.** A man, aged thirty-five, ill five weeks, was discharged cured at the end of six weeks.

**CASE V.** A woman, aged thirty-five, was once previously cured by the "sour drink", and desired its repetition at the end of nine months, when her health had returned. She was again relieved in a fortnight.

A few pertinent remarks upon the potency and value of dilute nitric acid in many conditions of the system terminate this instructive paper. [The well known value of nitric acid in many diseases has, from time to time, been brought before the notice of the profession by many observers, more especially Drs. Thudichum, Ranald Martin, Bence Jones, and others. A large number of diseases and local cases, for which the acid has been advised by different observers, is given in the *Medical Digest*, section 247.—*Rep.*]

**PRICE ON NITRITE OF AMYL IN AGUE.**—The value of this drug has been lately much discussed in the various medical journals, and in the *Lancet* (vol. i, 1878, p. 445) Dr. Gordon Price, of Jessore, adds his testimony to its value in many instances during the cold stage. Having tried the agent himself, and having frequently suffered from previous attacks, he is in a good position for testing the relative value of different medicines, and speaks most enthusiastically of its most beneficent effects in his own person. Dr. Ziegler was the first to bring the value of this remedy in the cold stage of ague under the notice of the profession (*Medical Times and Gazette*, vol. ii, 1876).

RICHARD NEALE, M.D.

**GUNTZ ON THE DETECTION OF MERCURY IN THE URINE.**—Guntz (*Vierteljahrschr. für Dermatologie und Syphilis*, Band iv. (N.F.) Heft i, p. 2) employing Ludwig's process for the detection of mercury in the urine, has arrived at the following results with regard to the period of the duration of this drug in the human system, and the liberating action upon it of sulphur internally and combined with baths. 1. Mercury may be detected in the urine, after eight weeks or more have elapsed since the discontinuance of any mercurial treatment. 2. In cases where the urine gives no evidence of the presence of mercury after

the administration of the drug, this may be detected after two or three days of sulphur treatment. 3. After a few days of such treatment, the urine no longer gives any signs of the existence in it of the metal. 4. While the mercury is thus being eliminated from the system, there is frequently a fresh outbreak of the symptoms of syphilis. The therapeutic influences from these facts are, that mercury is the antagonist of syphilis; that it should be administered in small doses and temporarily discontinued upon the slightest manifestations of salivation; and that sulphur is of service where too much has been administered.

SEE ON THE ADMINISTRATION OF IODIDE OF POTASSIUM AND IODIDE OF ETHYL IN THE TREATMENT OF ASTHMA.—We here give the method of administration of these medicines, referred to in the LONDON MEDICAL RECORD of March 15. The original dose of iodide of potassium is  $1\frac{1}{2}$  gramme (19 grains), which is gradually increased, up to 2 or 3 grammes. It is given in solution in water or wine, in the proportion of one part in twenty. A dessert spoonful is given before each meal, and, after a few days, two tablespoonfuls; that is to say, 3 grammes daily. It is preferable to take the same doses in syrup of orange-peel instead of in solution. Some patients also prefer to take their medicine in unfermented bread. The duration of the treatment is practically indefinite; but generally at the end of two or three weeks, when the attacks are lessened or put under control, M. Sée diminishes the dose and prescribes a gramme and a half (22 grains) *per diem*. Occasionally a day may be intermitted, but a longer suppression may induce the return of undesirable symptoms. To obviate the bad effects of the iodide, when taken alone, M. Sée generally prescribes at the same time 10 centigrammes (a grain and a half) of extractum opii, or 40 grammes of syrupus papaveris, combined with an equal quantity of syrup of the iodide. The cough, which increases the oppression, is thus removed or lessened. He also, with the same object, either with the iodide or separately, used three grammes of chloral mixed with syrupus acaciæ. Thus the iodide at the time of taking meals and the chloral in the evening are instrumental in lessening the dyspnoea.

The bad results of a prolonged employment of iodide of potassium consist, in the first instance, in sanguinolent exudations from the mouth and pharynx, then in true hæmoptysis, but this effect only occurs in persons predisposed to tuberculosis, and therefore the iodide must be absolutely prescribed in tuberculous subjects, or those in whom the diagnosis is uncertain. The general results have been, according to M. Sée, a complete cure in every case, even when the patients were in atmospheric conditions usually found injurious. The patients much more easily resist the variations of temperature, the influence of heat and cold, the action of wind and dust. Neither need any precautions with regard to regimen be taken; the use of coffee and tobacco has not been found injurious.

The iodide of ethyl employed as inhalation doses of from six to ten drops, stopped the attack very quickly in five cases. In one of the patients the effect was more rapid than that of fumigations of nitre or of chloroform. In cases of cardiac dyspnoea, of chronic bronchitis, with dyspnoea, and even in the case of a patient suffering from cedematous laryngitis, respiration was considerably facilitated by these inhalations, repeated several times a day.

PAUL AND DUJARDIN-BEAUMETZ ON SUBCUTANEOUS INJECTIONS OF CHLOROFORM.—M. Constantine Paul communicated to the Société de Thérapeutique (Feb. 13, 1878) a remarkably successful treatment of a case of confirmed sciatica by injections of chloroform. They removed the pain and caused no accidents. M. Dujardin-Beaumetz said that he had continued his investigations respecting subcutaneous injections of chloroform (see LONDON MEDICAL RECORD for March 15, 1878, pp. 127, 128). Since he had performed them with greater regularity, he did not meet with any local accidents, and, if they did occur, it was in consequence of the operation being badly performed. The greatest attention must be paid to the manipulative part of the operation, and hence these injections would never come into general use. Especial care must be taken, when once the cannula was placed in the cellular tissue, not to penetrate the deep surface of the dermis at its lower surface when introducing the syringe into the cannula, otherwise a slough would be produced. With reference to the general effects, M. Dujardin-Beaumetz had observed that with from four to six grammes (a drachm to a drachm and a half) of chloroform injected at once sleep was obtained; not anæsthetic sleep, but a more or less deep calm and repose, which came on very slowly from four to seven hours after the injection, and sometimes lasted one or two days. Alcoholic and hysterical patients were much more difficult to bring under the influence of chloroform, and in these cases from ten to twelve grammes (two and a half to three drachms) were requisite to produce the same effects. Thus chloroform introduced in this manner into the animal economy produced the effects of chloral, and passed but very slowly into the system. These injections, in contradistinction to injections of ether, lowered the pulse and the temperature. M. Dujardin-Beaumetz performed these injections in the cellular tissue of the back, and allowed to each puncture two grammes of chloroform (half a drachm).

BLACHE ON THE TREATMENT OF INFANTILE DIARRHŒA.—Dr. René Blache, in the *Journal de Thérapeutique*, July 25, 1877, studies diarrhœa in young children, and shows that there are several stages in this affection, and that it frequently suffices to combat the first stage of this diarrhœa to prevent the appearance of the serious symptoms of choleric diarrhœa. Whatever may be the nature of the diarrhœa, its origin, intensity, or even the distance of the time when it showed itself, M. Blache employs the following treatment, which he has always found successful, modifying it according to circumstances. 1. Reduction of the quantity of food given; suitable injections repeated according to need, and poultices on the belly. 2. The administration each morning during three, four, or five consecutive days, of a small teaspoonful of equal parts of castor-oil and syrup of gum arabic, simply emulsified by shaking the bottle at the time when it is used. When the child is under six months old, one gramme (15 grains) of castor oil is enough for a dose; and if from six months to two years old, from two to three grammes are necessary. If after the second day the diarrhœa be less but have not entirely disappeared, no more of the medicine should be given than on the day before. On the other hand, if the stools be particularly foetid and glairy, another dose must be given on the same evening, as well as on the next day. If the case be one of profuse liquid diarrhœa, recurring twelve, fifteen, or even more times in the twenty-four hours,



the mixture must be altered, doubling or trebling the dose of gum, and adding a little vinum opii, from one to three drops at the most, according to age, in the four-and-twenty hours, and the medicine must be repeated every two or three hours. The object or effect of this castor oil treatment is to cleanse the mucous membranes, which it modifies, without, however, purging in the general acceptation of the term. Injections are equally useful. First a large injection of camomile tea is given, followed in twenty minutes by a small injection of starch. These are repeated whenever a series of four or five actions of the bowels occur in the space of from six to ten hours. In the latter case bran of marsh mallow is substituted for camomile. As to the absorbents, more especially bismuth, so often used in these cases, M. Blache distrusts them, as they may bring on convulsions, doubtless by preventing the cleansing of the mucous membrane.

**GUYOT ON SULPHATE OF QUININE IN DIARRHŒA.**—M. Guyot read to the Société Médicale des Hôpitaux (*Journal de Médecine et de Chirurgie Pratique* for March) a case in which the patient was cured of a catarrhal diarrhœa which had lasted several months, by the administration of sulphate of quinine. All other medicines had been employed without effect; and on M. Potain's recommendation M. Guyot prescribed the following: sulphate of quinine, half a gramme; syrup of codeca, 30 grammes; gum julep, 100 grammes. The mixture was continued for a long time, and the dose of sulphur of quinine progressively increased to one gramme. M. Poteau has also obtained cures in obstinate diarrhœa by the use of sulphate of quinine even when, as in the present case, the patient showed no traces of malarious infection.

**LABAT ON THE TREATMENT OF CONGENITAL HYDROCELE BY INJECTIONS OF ALCOHOL.**—Dr. Francis Labat has observed in Dr. Launclonque's wards, the good results obtained in the cure of congenital hydrocele by injections of alcohol according to Monad's method. The following plan is pursued (*Thèse de Paris*, Nov. 19, 1877). With a subcutaneous injection-syringe, one gramme of the serous matter contained in the hydrocele is evacuated, and one gramme of alcohol injected with the same syringe. In the meantime, pressure is made on the inguinal canal, and prolonged some minutes after the alcoholic injection.

#### RECENT PAPERS.

- Experimental Researches on the Biological Action of Salicylic Acid and Salicylate of Soda. By Drs. V. Chirone and S. Petrucci. (*Commentario Clinico di Pisa*, January-February, 1878.)
- Camphor in the Treatment of the Sleeplessness of the Female Insane. By Dr. E. Wittich. (*Berliner Klin. Wochenschrift*, March 18.)
- The Principles of Electro-Therapeutics. By Dr. W. G. Smith. (*Dublin Journal of Medical Science*, March 1.)
- A Case of Simple Ulcer of the Stomach successfully treated by Hydrate of Chloral. By Dr. Charles Hertzka. (*Bulletin Général de Thérapeutique*, March 15.)
- On the Relative Value of various Preparations of Pomegranate Bark in the Treatment of Tænia. By Dr. J. Marty. (*Bulletin Général de Thérapeutique*, March 15.)
- On the Search for and the Estimation of Sugar in slightly saccharine Urines. By M. Charles Tauret. (*Bulletin Générale de Thérapeutique*, March 15.)
- On Phosphide of Zinc in Neuralgic Affections. By Dr. Camille Trubert. (*L'Union Médicale*, March 9.)
- Infantile Therapeutics. By M. Jules Simon. (*Le Progrès Médical*, March 9.)
- Experiments on the Therapeutic Properties of Aconite and Aconitine. By Dr. Brochin. (*Gazette des Hôpitaux*, March 23.)
- Persulphuric Acid and Maté. By M. E. Ferraud. (*La France Médicale*, March 6.)
- On the Physiological and Therapeutic Properties of Glycerine. By M. A. Catillon. (*Ibid.*)

#### OBSTETRICS AND GYNÆCOLOGY.

**ALBERTS ON BLOOD-TUMOURS OF THE PELVIS.**—In the *Deutsche Medicinische Wochenschrift* for February 1878, Dr. Otto Alberts relates the following four cases which occurred in the gynæcological clinic of Professor Spiegelberg.

**CASE I.** Rosina K., aged 26, wife of a mason, had one child in 1874. She had always been healthy. She was admitted into Professor Spiegelberg's ward January 16, 1877. Since her last period, she had suffered from pain of an acute character in the back. On examination, there was nothing abnormal on abdominal palpation. *Per vaginam*, a tumour of the size of a child's head was felt behind the uterus. There was slight hæmorrhage. The presence of a retro-uterine hæmatocele was diagnosed. The patient became weaker day by day, and, on February 6, the tumour was punctured through the posterior wall of the vagina with a Dieulafoy's aspirator. The characteristic bloody fluid escaped, and the patient gradually recovered.

**CASE II.** Johanna Th., age 28, servant, had always been healthy. At the last catamenia she strained herself in the stomach, whereupon the flow immediately ceased, and most severe pain set in over the left iliac region. On examination by the abdomen, there was felt a tumour rather larger than a hen's egg in the left pelvic region. Bimanual examination revealed a slightly enlarged and antelected uterus. The tumour could be felt in the left fornix, and seemed to have firm cyst walls. Dr. Spiegelberg confirmed the diagnosis of Dr. Alberts that there was a blood-tumour of the left Fallopian tube. On June 7, Dr. Spiegelberg punctured the tumour with a trocar and let out some foul sanious fluid. The cyst slowly contracted; and, although there was some fever for several days, the patient recovered.

**CASE III.** Bertha J., single, aged 18, always healthy, never menstruated, for some weeks had suffered from dysuria and dyschezia, together with pain in the lower abdomen. On examination it was found that she had an imperforate hymen. The result had been an accumulation of menstrual fluid in the uterus and vagina, forming a hæmelytometra. By the abdomen, the enlarged uterus could be felt as high as the navel. On February 13, Dr. Spiegelberg incised the hymen under water, the patient being placed in a bath. A considerable quantity of ichorous fluid escaped. With the exception of a left suppurative parotitis, the patient slowly recovered without further complications.

**CASE IV.** Rosina R., peasant, age 40, married, with no children, had always been healthy. In 1871 she had small-pox, from which she recovered. From this time the menses became more and more scanty and more painful. Finally, they almost entirely ceased, and, in April 1877, she entered the hospital. Abdominal examination revealed a small movable tumour in the median line behind the symphysis pubis. *Per vaginam*, the passage of the finger was arrested half way by a *cul-de-sac*. By the speculum it was seen that cicatricial atresia had taken place, leaving only a small pin-hole aperture through which a catgut could be past. The upper portion of the vagina and the uterus had become distended with retained menstrual blood. The diagnosis was atresia vaginæ acquisita, with hæmelytometra. The vagina was dissected up by Dr. Spiegelberg under carbolic spray. The imprisoned fluid having been released, the patient recovered. Dr. Spiegelberg was of opinion

that the atresia vaginæ resulted from the attack of small-pox.

**FOTHERGILL ON OVARIAN DYSPEPSIA.**—In the *American Journal of Obstetrics*, January 1878, there is an article by Dr. Milner Fothergill, in which he draws attention to a form of dyspepsia induced and kept up by irritation from the ovary. Dr. Fothergill says, that the condition known as oophoria gives rise by reflex action to intercostal pain, leucorrhœa, and an imperfect performance of the menstrual function. The dyspepsia is the direct and immediate consequence of the ovarian irritation. The following case illustrates the subject.

A girl aged 22 was sent into the West London Hospital as a case of long-continued retching and vomiting. The house-surgeon gave her an effervescent mixture containing hydrocyanic acid, which gave some relief. The girl was pale and anæmic, with lack-lustre eyes, and a peculiar expression about her which made me at once feel sure that she was the subject of ovarian disturbance. It was found at once that the left ovary was congested and exquisitely tender, pressure over it almost leading to syncope. There was also menorrhagia and leucorrhœa. The ovary was treated, and in ten days the girl left the hospital well. The stomach had been treated nobody knows how long without avail.

Dr. Fothergill's treatment consists in relieving the pelvic congestion by such purges as magnesia and aloes; soothing the irritated nerve-tracts by bromide of potassium; and giving new tone to the stomach by gentian, etc.

**GAUTIER ON THE RELATION OF ICHTHYOSIS TO MEMBRANOUS DYSMENORRHŒA.**—In the *Annales de Gynécologie*, December 1877, Dr. Gautier draws attention to the association of ichthyosis with the membranous dysmenorrhœa. Bernutz, Siredey, and others have noticed that dysmenorrhœa membranacea affects more commonly those persons of anæmic, debilitated, scrofulous, or tuberculous diathesis. Dr. Gautier regards the ichthyotic disposition of the mucous membrane of the uterus as incurable. The treatment for the dysmenorrhœa is to procure an easy exit for the membranous masses which have to be expelled. Dr. Gautier notes the fact that ichthyosis is hereditary, and that there is a strong presumption in favour of dysmenorrhœa membranacea being hereditary.

**LEBERT ON THE INFLUENCE OF PREGNANCY IN PHTHISIS.**—In the *Nice Médical*, February 1878, Dr. A. Lebert says that for a long time it was believed that pregnancy arrested or suspended the progress of pulmonary phthisis. In 1850 Grisolle affirmed that pregnancy aggravated the phthisical condition. Dr. Lebert's observations support, in the main, those of Grisolle; but he finds that the results of labour are more pronouncedly deleterious than those of pregnancy. Out of 33 phthisical girls who married, 10 died in their first labours. He is of opinion that the physician should discourage marriage in any young girl, who has shown at any time symptoms of tuberculosis.

FANCOURT BARNES, M.B.

**GOODELL ON THE TREATMENT OF PELVIC CELULITIS AND PERITONITIS.**—In a clinical lecture delivered by Dr. W. Goodell (*Philadelphia Medical Times*, Feb. 2) on pelvic peritonitis and cellulitis, the author gives the following advice as to treatment.

The disease having been recognised, administer at once a full hypodermic dose of morphia, and from ten to twenty grains of quinia by the mouth. If you take these measures promptly, you will often stop the disease at once.

If you cannot abort the attack, you must paint the abdomen with iodine and put on a poultice, covering it with oiled silk, or greased brown paper; it will then remain soft for twenty-four hours. The patient must have large doses of quinia. If the temperature be high she should have ten grains at a time, and from thirty to forty grains in the course of the day. Large doses of morphia must also be given. If the woman be plethoric, the morphia may be given by the mouth, with neutral mixture and wine of ipecacuanha, or in some other fever mixture. In some cases tonics are demanded. If the sickness last for more than a week, and the local tenderness increase, put on a blister promptly.

Later, muriate of ammonia is an excellent remedy in this disease; so, too, is aconite. Dr. Goodell usually prescribes the following:

R. Mist. glycyrrhizæ comp., ℥vi; ammoniæ muriatis, ʒii; hydrarg. chloridi corrosivi, gr. i; tinct. aconiti radidis, gtt. xxiv. A tablespoonful in water every six hours.

As concerns routine treatment, the patient should take plenty of milk, whisky, beef-tea, and large doses daily of dialysed iron.

#### RECENT PAPERS.

- On some Disturbances of the Venous Circulation in New-born Infants. By Dr. Brochin. (*Gazette des Hôpitaux*, March 9.)  
Occlusion of the Vagina. By Dr. James Young. (*Edinburgh Medical Journal*, March 1878.)  
Contribution to the Study of Eclampsia in Pregnant Women. By Dr. Quantin. (*L'Union Médicale*, March 21.)  
On Obstetrical Anæsthesia. By Dr. Lucas-Championnière. (*L'Union Médicale*, April 2.)  
A peculiar Case of Puerperal Parenchymatous Polymyositis with Interstitial Neuritis. By Dr. F. Winckel. (*Centralblatt für Gynäkologie*, March 30.)  
Dilatation of the Uterus by Laminaria Digitata. By Dr. B. S. Schultze. (*Ibid.*)  
Puerperal Convulsions. By Mr. William Berry. (*The Obstetrical Journal*, April 1878.)  
Antiseptic Precautions in Midwifery Practice. By Dr. F. W. Newcombe. (*Ibid.*)  
Natural Elimination of an Uterine Fibroma. By Dr. A. Ricordi. (*Annali Universali di Medicina e Chirurgia*, March.)

#### REPORTS OF FOREIGN SOCIETIES.

##### IMPERIAL ROYAL MEDICAL SOCIETY OF VIENNA.

March 8, 1878. *Molluscum Fibrosum*.—Dr. Hebra, junior, showed a case of molluscum fibrosum. According to Rokitsansky, this disease is produced by the development of a gelatinous tissue on the deeper interstitial spaces of the corium. The tumour can be shelled out of the cutaneous capsule surrounding it. The swellings are generally developed early in life, and grow very slowly, and may become so numerous that several hundreds have been met with in one individual. They give rise to no pain or trouble, and only produce inconvenience when they become large and pendulous. This disease may be confounded with the so-called molluscum contagiosum or sebaceum. While, however, molluscum fibrosum consists of a pure connective tissue growth, molluscum sebaceum is formed of the physiological sebaceous glands, and the contents (the



sebaceous secretion) can readily be squeezed out with the fingers. The etiology of molluscum fibrosum is very obscure. It is said that all the subjects of this disease have had spinal distortion. In the present case there was a considerable amount of scoliosis. The patient was a man aged 55, who had had the disease since he was 26 years old. The tumours varied in size from a hempseed to a hazel-nut, and in some parts were pendulous: they were especially numerous on the skin of the neck and abdomen, but were also remarkably developed on the chest, back, and thighs. Dr. Hebra showed a series of drawings of similar cases.

*Hydatids.*—Dr. Chiari showed several hydatid growths which he had found in the broad ligament of the uterus and ala vesperilionis of the right side in a woman aged 65, who had died of croupous pneumonia. Four such tumours were found, varying in size from a walnut to a man's fist. A similar swelling, of the size of a man's head, was found in the right lobe of the liver; there were none in any other part of the body. Dr. Chiari could not decide whether the liver tumour was the primary one, or whether the hydatids in the uterine appendages owed their origin to a second importation.—In the discussion which followed, Dr. Funk, Dr. Heschl, and Dr. Dittel expressed the opinion, founded on cases which had been observed by themselves and by others, that the tumour in the liver was the primary one, and that the echinococci were by some means conveyed from it to the uterine appendages.

*On the Motor Functions of the Cortex Cerebri, with Demonstrations.*—Dr. Obersteiner said that in recent years numerous experiments had been made by irritating the cortex cerebri in removing portions of it, the result of which had been to show that certain portions of it were intimately connected with motor functions. He had had the opportunity of convincing himself, by numerous experiments, of the existence of such psychomotor centres in the cortical substance of the brain. There was no vicarious assumption, by other parts of the grey matter, of the function of the parts removed. In rabbits, in whom the centre for the fore-leg was removed, the limb remained in the same condition a year after the experiment. The different forms of motions are more distinctly marked out in the cortex cerebri of animals, whose movements are, as a rule, under the control of consciousness, than in those where reflex actions predominate; hence, newly born animals are not available for the experiments in question. Even in the same individual there is a difference between the various muscles, according as they are more or less under the control of the will. Experiments on animals were confirmed by pathological observation. Among 42 cases of pure disease of the cortex cerebri in the motor zone, in which the extremities manifested symptoms, in 11 cases the upper limbs alone were affected; in 22 the upper much more than the lower; in eight the upper and lower equally; and in one the lower alone. This preponderance of morbid symptoms in the upper limb stands in direct relation with its more delicate function, which is more subject to the will than that of the lower limb. When, in cases of central disease of the brain, the symptoms are more strongly marked in the lower extremities than in the upper, the existence of lesion at a point distant from the cortex cerebri may be assumed.

March 15. *Rhinoscleroma.*—Dr. Weinlechner showed a case of rhinoscleroma, also a drawing and a plaster cast of two cases which had formerly come under his observation. In the present case the

patient was thirty years old. Besides the usual changes in the case, both nostrils were obstructed, the palate was defective, and at the inner angle of each eyelid was a rounded flattened swelling, depressed in the centre, which caused considerable narrowing of the space between the lids. Dr. Weinlechner had restored the patency of the nostrils by the application of the thermic cautery, and was about to operate in the same way on the eyelids.

*Catheterism of the Larynx.*—Dr. Weinlechner said that, at a meeting of the Society in 1869, he recommended catheterism in cases of stricture of the larynx. The practicability of the operation in adults was at that time denied by Stork. In 1871, however, Dr. Weinlechner saw cases of narrowing of the trachea and larynx treated by Trendelenburg in Langenbeck's clinic in Berlin, with bougies and metallic sounds, and he had since adopted a modification of this treatment. He demonstrated it on a patient who had previously been cured by Schrötter of contraction of the larynx, but in whom the affection had returned, and had been again removed in four weeks by Dr. Weinlechner. The patient had been operated on for laryngeal stenosis resulting from laryngeal perichondritis, which came on during an attack of small-pox; he wore a tube. In order to treat the stenosis of the larynx, a silk thread was passed through the mouth, larynx, and upper opening of the trachea-tube, and brought out through the external orifice of the tube; the two ends could then be knotted together. The thread caused no hindrance to speech, eating, or drinking, and was renewed only when it was spoiled. It served as a guide for metallic or gutta percha sounds. In commencing the treatment of the stricture, the silk ring was unfastened, and the sound, which also had a silk thread at each end, was fastened to the mouth-end of the thread, and, by traction on the tracheal end of the thread, was drawn down to the inner opening of the trachea-tube. In removing the sound, it was simply drawn to the mouth and set free from the guiding thread. The advantage of this proceeding was its simplicity: it could readily be learnt by the patient himself. In the present case, the patient was able to wear the sound from three to five hours, instead of only half an hour as at first. During the remainder of the day, and during the night, the patient breathed through the larynx, the cannula was either stopped, or it was removed, and the opening in the trachea was closed with a gutta percha plug. Dr. Weinlechner had operated in the same way in 1871 on a girl on whom laryngotomy had been performed after typhus. She was cured of the stenosis of the larynx, and died in 1877 of pulmonary phthisis. The larynx was shown. He had also done the operation—which was, of course, available only when laryngotomy had been performed—in several cases of croup and diphtheria.

#### ACADEMY OF MEDICINE IN PARIS.

June 19. *Disarticulation at the Hip-Joint.*—M. Lefort spoke on coxo-femoral disarticulation. (See LONDON MEDICAL RECORD for March 15, 136.) He said that the loss of blood was undoubtedly the principal cause of death in this great operation, but that it did not proceed only from the occasionally profuse hæmorrhage which accompanied disarticulation. It must be borne in mind that, in reducing the weight of the body by nearly one-fourth, a considerable amount of blood was removed with the limb.

Thus the operation was relatively mild in patients who had already undergone amputation of the thigh at a more or less distant period before the disarticulation. M. Verneuil's last success might then be attributed, not so much to the method employed—which was, at least, too protracted in less skilful hands—but to the bloodlessness of the limb, obtained by Esmarch's bandage. M. Lefort then treated of the questions of union by first intention, of which he examined the conditions necessary for success, and the means of obtaining it. Amongst these means, he insisted on compression and deep sutures, which he had used for ten years, and which favoured the union of the deep parts. Primary purulent infection, which must be avoided at any price in an amputation, having for its starting point the bone and not the soft parts, union by first intention at the level of the bone was the most important indication. With this aim he endeavoured to obtain deep union, being satisfied to sacrifice to it superficial union at the level of the skin in order to allow the egress of the discharges when in excess. With regard to the dressings, he spoke specially of M. Guérin's cotton-wool dressings and Lister's carbolised dressing, which were based on M. Pasteur's doctrine of germs floating in the air considered as agents of putrefaction, and proceeding, according to M. Guérin and Mr. Lister, from purulent infection. This doctrine left too many points unexplained to be accepted unreservedly; and if the dressings which had originated in it were of service, it was by a mechanism foreign to the theory of their inventors. Barriers of cotton-wool had not prevented vibrios from being found under the dressing; and, to destroy the atmospheric germs, there was no occasion to use so much carbolic acid, nor to take so many precautions; besides which, these two dressings had not prevented purulent infection. M. Lefort refused to admit the terrible influence of germs in wounds; in any case, the successful results obtained by open dressings were not easily reconcilable with this doctrine. He admitted, on the other hand, that the primary purulent infection, as well as proceeding from the wound, originated under the influence of local and general phenomena—intrinsic, and not extrinsic, to the patients; and that the condition of the general state, alimentation, diathesis, etc., must be taken into account.—M. Pasteur announced that he intended to demonstrate that the clinical facts were not out of harmony with the germ-theory.

Feb. 26. *Iodide of Potassium in Asthma*.—M. Jaccoud claimed the priority of treatment of asthma by iodide of potassium for Trousseau, who employed it in 1849, and who, so far from limiting its administration to the paroxysms, used it for the cure of the disease itself. He finally reproached M. Sée for having given a too condensed history of this medicine, and, therefore, for having omitted to name celebrated physicians, both French and foreign, who had used it.—M. Pidoux endeavoured to show the faultiness of a method which consisted in treating different things in the same way, considering the varieties of asthma and of asthmatic patients.—M. Sée replied that, if iodide of potassium had previously been used, careful records of the patients having been kept under observation for a year or two were wanting if there were different forms of asthma. The iodide attacked asthma in general in its anatomical elements, and in the functional troubles which characterised them; *i. e.*, in respiratory innervation, which was favoured by iodine, and especially in the bronchial secretion, which the iodine ren-

dered more easy and more fluid, and so favoured the admission of air to the lungs.

March 5. *Virulence and Anthrax*.—M. Colin read a paper on the successive development of virulent foci during the incubation period of anthracoid diseases. His researches had led him to the conclusion that the lymphatic glands were the first organs which were infected with the virulence, after the deposit or penetration of anthracoid virus at some point in the organism. These organs became virulent in succession, according to the order of their situation in the track of the lymphatics, setting out from the points of inoculation. They became transformed into virulent foci, both by deposit and by reproduction of the anthracoid virus in their tissue, or in the liquids with which they were impregnated. During a somewhat lengthened period they were, together with the puncture and its surrounding œdema, the only portions of the animal economy possessing virulent properties. They possessed these properties even for a certain time before the appearance of bacteria within them, when the virulence did not belong in any degree whatsoever to the blood, nor to the very vascular organs, such as the liver, spleen, and viscera. These glands, receptacles and regenerators of the virus, were active foci during incubation, and up to the last periods of the disease. Their activity revealed itself by tumefaction, œdema, reddish colour, interstitial hæmorrhage; in a word by a specific irritation, by new properties, and by the development of bacteria. Together with the puncture and its peripheral infiltration, they were the foci whence principally, perhaps exclusively, the general infection of the animal economy proceeded.—M. Pasteur disputed the novelty of some of these results, and protested against M. Colin's assertion that the gland went through two states of virulence—one without and one with bacteria. In order to affirm that the matter in the glands was virulent before any bacteria were present, M. Colin must demonstrate their absence from that matter by cultivation in an appropriate medium. M. Colin had only ascertained this absence by the microscope; and M. Pasteur did not admit the value of this proof.—M. Bouley proposes to settle the difference by a commission. It must also be remarked that if the lymphatic gland were the first organ in which the virus settled before infecting the economy, it would be highly important from a therapeutic point of view—since it would be possible to prevent the infection from becoming general by destroying the virus *in situ*.

March 12. *Cerebral Localisation; Brachial Monoplegia*.—M. Bourdon submitted to the Academy the brain of a phthisical patient who had been under his care, and who, towards the last, had aphasia and paralysis of the forearm and the left hand. The brain showed two foci of softening, situated in the cortical zone, where the lesions in the cases of brachial monoplegia, recorded in a former communication, were situated. The accidents had followed a very rapidly decreasing progress, which, with the persistence of sensibility, recalled the principal characteristics of paralysis of cortical origin. The difficulty of speech only lasted three hours, the paralysis of the lower limb three days, and that of the arm only lasted for twenty days. This complete recovery from the paralysis, which lasted for a month, that is to say, until the death of the patient, supported the opinion maintained by M. Bochart on the manner of re-establishment of motility by substitution in this kind of affection; for, destructive lesions having been found at the necropsy, it followed as a necessary con-



clusion that a movement became re-established in the paralysed parts, by the aid of the adjacent nerve-cells, which had remained healthy.

### ACADEMY OF SCIENCES IN PARIS.

*Air in the Arterial and Venous Systems.*—M. V. Feltz read a paper on the effects of air introduced into the arterial and venous systems. His experiments had resulted in the following conclusions. 1. The introduction of air into the left side of the heart gives rise to general nervous symptoms, bringing on death in a short time. The reflex power of the medulla is suppressed or increased. The sphincters are relaxed or convulsed; the heart beats regularly; the respiration is spasmodic. 2. Injection of air into the abdominal aorta produces symptoms of more or less persistent paraplegia and respiratory troubles, likely to bring on death by asphyxia, especially when the air is driven below the diaphragm. The excitomotor power of the spinal cord is occasionally increased. 3. Air introduced into the cerebral circulation brings on a more or less decided paralysis of motion and sensation, with predominance of the signs on the one side or the other. The power of the medulla remains unimpaired, but the organs of sense may be paralysed. The heart and the lungs are rarely disturbed, and death is sometimes accompanied by tetanic spasms.

*Treatment of Cancer of the Breast by Ischæmia of the Mammary Gland.*—A paper was read in which M. Bouchut advocated the treatment of cancer of the breast by producing bloodlessness of the part by pressure with vulcanised caoutchouc. He said that, by preventing the blood from reaching the cancer, its nutrition and development were suspended, so as to produce cure. Ischæmia of the mammary gland might be obtained by permanent compression, made by vulcanised india-rubber. Permanent ischæmia of the breast brought on gradual atrophy of that gland. Applied to the treatment of cancer and of adenomata of the breast, ischæmia stopped the capillary circulation in these morbid products, and thus led to their atrophy. The best means of producing ischæmia of the breast or the glands of that organ was the permanent application of a compressing cuirass of vulcanised India-rubber, lined with several thicknesses of cotton-wadding.

Feb. 18. *Resection of the Tibio-calcaneal Joint.*—M. C. Sédillot presented a note on this subject. In Pirogoff's amputation he had proposed to divide the os calcis from behind forward obliquely, instead of Pirogoff's vertical cut with the saw. The os calcis and tibia could thus be brought together more easily, the bony surfaces were not so much pressed against each other, and the heel, no longer being thrown forward and upwards, remained better in the axis of the leg, and transmitted the weight of the body more directly to the ground. M. Sédillot reported a case of M. Boeckel's, in which amputation was performed in accordance with these modifications. This operation was followed by complete cure, and the patient walked perfectly well with one boot rather higher than the other.

Feb. 25. *Oxygen.*—A note by M. P. Bert on the action of oxygen on the anatomical elements was read. He said that the anatomical elements could not combine with free oxygen. They borrowed it from the oxyhæmoglobic combination, and so soon as the pressure of the oxygen, to which the body was submitted, exceeded five or six atmospheres, the

elements died, because, the corpuscles, being then saturated, the gas was dissolved in the plasma.

*The Pulse.*—M. A. Mosso sent a communication on the local variations of the pulse in the forearm of man. The following were the principal facts, which were brought out by the experiments of the writer. 1. Whenever, the mind being in absolute repose, this rest is broken to perform any intellectual work, such as solving a question, or making a calculation, the tracing of the pulse is considerably modified. The type and the form of every pulsation of the forearm are completely changed; the vessels contract, the frequency of the pulsations of the heart is increased; at the same time, the volume of the brain becomes increased. The verification of this fact has been made possible in three subjects who had an accidental opening in the skull. 2. During sleep, noises, touch, the action of light—in a word, all the means by which the sensorium is excited—are followed by a profound change in the form of the pulse; and that even when, in a profound sleep, the impression is not perceived, and no memory of it is retained. 3. The local variations of the pulse, determined by the influence of heat and cold, studied independently of reflex influences or cardiac troubles, give rise to the following remarks. Dicrotism and polycrotism of the pulse should be considered as local phenomena, due to the state of elasticity of the blood-vessels in all parts of the body. By increasing the pressure which supports the forearm, which is done very simply by means of this apparatus, the number of catacrotic elevations may be varied, and delay in the appearance of the dicrotism is produced, which is transported towards the end of each pulsation. The compression of the brachial artery, and the application of Esmarch's elastic ligature, produce a disturbance of nutrition of the walls of the vessels.

### REVIEWS.

*Lectures on Surgical Pathology and Therapeutics: a Handbook for Students and Practitioners.* By Dr. THEODOR BILLROTH, Professor of Surgery in the University of Vienna. Translated from the eighth edition. Vol. II. London: the New Sydenham Society. 1878.

Professor Billroth's Surgery, published by the New Sydenham Society, the second volume of which has but recently appeared, is no novelty to English-speaking surgeons. In 1871 Dr. Hackley, of New York, presented a translation of the same work to the medical world, which was largely read, and served to modify extensively the views held on several important points of pathology in this country.

It may appear at first sight as if the funds at their disposal might have been better employed by the New Sydenham Society, in presenting to their subscribers some fresh work from a continental source; yet we must remember that since the American translation four editions have appeared in Germany, and that pathology, of all sciences, is the one which is making the most rapid strides in advance, especially in latter years, when original research has been carried on with unusual vigour and activity.

Then, without endeavouring to establish invidious comparisons between the English translation and that by Dr. Hackley—to whom indeed we owe a debt of gratitude for having been the first in the field by

seven years—we cannot blind ourselves to the circumstance that the New Sydenham translation is more likely to be read by those for whom the work was originally intended, students and practitioners, than the American edition, because, while being rendered in most fluent and unconstrained English, it is singularly free from obscurities and ambiguities with which translations generally abound.

The lectures contained in the second volume of this translation, which bears the date of the present year, may be considered roughly under three heads: firstly, traumatic and inflammatory complications which may supervene upon wounds; secondly, joint-diseases and affections of bone; lastly, the pathology of tumours.

As one of the accidents to which wounds are liable, Dr. Billroth begins with Hospital Gangrene, concerning which he is at variance with those authors who would make it identical with diphtheria. "A wound", he says, "which is inoculated with diphtheria becomes covered with a thick fibrinous membrane, the whole wound is infiltrated, and the surrounding parts become erysipelatous; then a great part of the infiltrated connective tissue necroses, and either melts away gradually or falls out in large shreds. On the other hand, there is not the spreading pulpy degeneration of the cutaneous edges of the wound, with the swelling and tendency to bleed, which is so characteristic in hospital gangrene". Although micrococci and streptococci are constantly found in the discharge from gangrenous sores (just as in diphtheria), it is impossible to say whether they are contained in the tissues previously to their decomposition; equally doubtful is it whether they are of a specific variety. It is certain, however, that the transference of hospital gangrene, either as pulp or pus, to healthy men, reproduces the disease, and this is a very important fact in practice.

Passing next to Traumatic Erysipelas we find that Dr. Billroth disapproves of Orth's theory that this condition is produced by the growth of micrococci on the surface of wounds, whence they are carried into the skin; rather deeming the cause to be a specific poison, "probably a dried material in the form of dust, which can affect a wound at any stage". The so-called spontaneous erysipelas of the head and face he simply does not believe, considering that it always proceeds from some slight wound, or from some inflammatory accident, as nasal catarrh, and that it is due to a septic cause.

The next "complication of wounds" which Dr. Billroth considers is Lymphangitis, under which head he most graphically and tersely describes the inflammatory changes in lymphatic glands. "The blood-vessels circulate freely within them, and thus the whole tissue becomes saturated with serum; large masses of cells fill out the alveoli, and this probably then interferes with the circulation of the lymph within the glands, then entirely stops it, and thus, to some extent, in consequence of some arrested lymph-circulation, the diseased process comes to an end, or at any rate is limited" (p. 18).

The cause of lymphangitis is in his opinion identical with that of erysipelas—septic poison. That great puzzle to surgeons, why in different cases at one time we have a diffuse phlegmonous inflammation, at another erysipelas, and at a third lymphangitis, he does not solve; merely suggesting that either local causes, or the quality of the septic material, is the probable determining agent.

No advance in the pathology of Phlebitis is recorded by Billroth; on the contrary, there is a return

to the earlier view that inflammation of the wall of a vein (even if no abscess form in it) may cause thrombosis.

Passing to general incidental diseases which may supervene upon wounds and "inflammation-nests", we learn that Dr. Billroth agrees to the employment of the term Fever only when there is an increase in the temperature of the blood, on the ground that by so doing "we are rescued from the chaos into which the old theory of 'fever' threw us". He, however, points out that there are many dangerous conditions after wounds or in persons afflicted with "inflammation nests" in which no increase whatever of temperature is demonstrable. His statement that wound-fever is always due to absorption of matters by lymphatic vessels, or through the walls of veins which have their origin in the wound or its neighbourhood, must afford the keenest satisfaction to those who profess and sometimes practise antiseptic treatment.

The circumstance that fever generally sets in on the third day after amputation, is accounted for by the hypothesis that the plastic infiltration which closed the edges of the wound begins to suppurate on that day, absorption of pus occurring simultaneously. When the fever commences on the very day of the injury, it is because blood has been shut in between the edges of the wound, or that an operation has been performed in tissues that have undergone inflammatory infiltration.

The profession generally is under an obligation to Dr. Billroth for pointing out the distinction between Septicæmia and Pyæmia. Hitherto the greatest confusion has prevailed in the employment of these two terms, which were considered by some interchangeable, by others as indicating different phases of the same condition, and by a third party as betokening distinct diseases, though in what the distinction consisted was never quite clearly laid down. Henceforth it is to be hoped Dr. Billroth's view of the question will be generally adopted; namely, that septicæmia is a disease running a regular course, characterised by a rising temperature, with its highest degree about the fifth or sixth day, then a gradual fall to the normal point, seldom below it ("the patient generally dying in a state of the most complete collapse with a thready very rapid pulse") in which *initial rigors are a very rare symptom, intercurrent rigors never occur*. This last characteristic alone suffices to establish a very definite boundary line between septicæmia and pyæmia. Touching its pathology, we learn that Professor Billroth does not hold with Weber that a ferment, originally from the air, excites decomposition after entering the blood, being rather of opinion that septic matters are already formed in the inflamed and gangrenous tissues, and so pass into the blood as efficient poisons.

In the hypothesis that cocci or bacteria may be the excitors of fermentation, he places no trust, on the very good ground that he could not find micrococci in the blood of living persons who had septicæmia, nor in the blood of such persons soon after death. From further experiments which he has made on the subject, Dr. Billroth has come to the conclusion that cocci and bacteria, far from increasing in living blood, soon die in it.

The lecture on Tetanus, Delirium Potatorum, etc., is perhaps one of the least satisfactory in this volume; as, while offering absolutely no contribution to the generally accepted pathology of these diseases, it does not treat them with the fulness which their pathological interest would warrant.



On "Chronic Inflammation, especially of the soft parts," Dr. Billroth is, of course, at his best. His remark that scrofula is not a *materia peccans* in the blood, but only a weakness of the organisation in a certain direction, a sometimes more, sometimes less, intense tendency to particular forms of disease, is a peculiarly happy one.

In the treatment of Tuberculosis, Billroth recommends the well-timed amputation of limbs or resection of diseased bones, as a preventative of the eventual development of tubercles.

W. J. ROECKEL, F.R.C.S.Eng.

*Cyclopædia of the Practice of Medicine.* Edited by Dr. H. VON ZIEMSEN.—Vol. iv. *Diseases of the Respiratory Organs.* By Dr. Fraenkel of Berlin; Professor von Ziemssen of Munich; Professor Steiner of Prague; Dr. B. Riegel of Cologne; and Dr. Fraentzel of Berlin. Translated by J. Burney Yeo, M.D., of London; J. Solis Cohen, M.D., of Philadelphia; A. Brayton Ball, M.D., and George M. Lefferts, M.D., of New York; and Edward W. Schauffer, M.D., of Kansas City. Alfred H. Buck, M.D., New York, Editor of *English Translations*. Pp. 776. London: Sampson Low. 1876.

This handsome and admirably appointed volume contains, like those which have preceded it, an exhaustive account of the diseases of which it treats. Each section is headed with ample bibliographical references, and a very full index completes the volume. The translations are exceedingly clear and good.

Passing to the matter of the volume, we must first of all grumble a little at what we venture to think an excess of explanation and description, here and there to be noticed. It is, of course, better, in both these respects, to be rather liberal than otherwise; but due care is needed not to offend the intelligence nor dull the attention of the reader by uncalled for explanations or needless descriptions. In the section on diseases of the larynx, for instance, we are gravely told how to depress the tongue with the finger—preferably the index finger—special directions being given to keep the finger out of the light, and to avoid its being bitten! Then, very nearly a page is taken up in describing how to utilise daylight in laryngoscopy; and two pages are similarly devoted to describing the employment of direct sunlight to illuminate the larynx. . . . In the article on Pleuritis some tolerably simple phenomena are explained in a very complicated manner; we may specially instance the explanation, pp. 628-9, adopted by the author, of the positions chosen by patients in different stages of pleuritic effusion.

These are, however, but trifling drawbacks to a volume of great value. The article by Riegel on Diseases of the Trachea and Bronchi is especially to be commended. Riegel criticises in considerable detail the various theories of nervous asthma—viz., 1, that the dyspnoea is due to spasm of the bronchial tubes; 2, that it is occasioned by spasm of the diaphragm, sometimes also attended by spasm of the glottis, and of the muscles of respiration; 3, that the secretion of a viscid mucus, containing minute crystals of mucin, sets up irritation in the bronchial membrane, and so gives rise to spasm; 4, that tumefaction of the bronchial mucous membrane is the most common cause of the dyspnoea. It would be well worth the while of any aspirant for M.B.Lond. honours carefully to "get up" the arguments here discussed in favour of and against these several theories. With

a little ingenuity he might build upon them a very creditable thesis, in the lucky event of the question being put. Dr. Riegel adopts the view regarding the existence of bronchial spasm as essential to genuine asthma, although he is fully prepared to allow an important share of the phenomena to engorgement of the mucous membrane—a cause of asthma recently advocated by Weber. Dr. Riegel's experience of iodide of potassium in asthma is not favourable; he relies principally upon narcotics during the paroxysm, and gives arsenic and quinine in the intervals.

In the section on Croup will be found a most graphic description by Steiner, the symptoms of the disease being depicted with a painful, but only too truthful vividness.

Fraentzel, in his article on Diseases of the Pleura, is distinctly ahead of modern text-books, in his better appreciation of the normal conditions which obtain in the thorax, and of their modifications in disease. Thus, p. 615, in speaking of pleuritic effusions, he recognises that there is no intrathoracic pressure, so long as the contractile lung is not completely relaxed by the advancing fluid. Again (p. 618), he refers to Traube as having noticed that in large pleuritic effusions the diaphragm on the healthy side takes a lower position, in consequence of the tension of the sound lung being relaxed by the encroachment of the fluid. We doubt whether the author's opinion as to the cause of the œdema of the thoracic wall in empyema will be generally accepted. He regards this œdema as due to such a considerable accumulation of blood in the veins of the pleura, from inflammatory venous stasis, as to hinder the return of blood from the veins of the intercostal muscles and skin. On this hypothesis, the occurrence of œdema should be an earlier and more constant symptom in emphyema. It is, however, a late phenomenon, coincident, as a rule, with the commencement of pointing, and would appear to be analogous to the œdema of a limb, which is associated with suppurative periostitis. In endeavouring to account for the pulsation, of cardiac rhythm, to be observed in certain cases of empyema, Dr. Fraentzel argues with Traube that a co-existent pericardial effusion and a weakening of the costal pleura, by suppurative action, are necessary factors. Pericarditis is, however, by no means always present in these cases; and in the most marked instance of pulsating effusion that has fallen under our own observation, so marked as to cause a suspicion of associated aneurism, the effusion was found to be entirely serous.

The treatment of empyema is, in the present day, a much vexed question, and one upon which no opinion should be too hastily given. But we cannot think that the mixed plan advocated by Dr. Fraentzel will commend itself to other physicians. Dr. Fraentzel directs the pleura to be incised under the carbolic spray, and with other antiseptic precautions, and then to be washed out with distilled water through two of Nélaton's catheters, until the water is no longer stained with pus. Antiseptic dressings are then applied. Surely, the washing out of the pleura is needless if Lister's method be properly employed; nor do we see how, practically, this thorough cleansing of the pleura can be effected without entirely vitiating antiseptic conditions. It becomes, indeed, sufficiently obvious as we read further, that all the antiseptic precautions are useless in this method of treatment, inasmuch as the dressings and the syringings are directed to be repeated twice every twenty-four hours, and in some cases even four or five times a day. Dr. Fraentzel

has, it is true, achieved a certain measure of success from this treatment, five of his cases out of eleven having completely recovered. But his method has the additional fault of being very troublesome, and therefore very unlikely to be carried out with the same care and thoroughness by those who are less experienced, or who in private practice have less efficient assistance. Dr. Fraentzel describes an ingenious instrument for the withdrawal of serous or purulent fluids from the pleural cavity without admitting air.

We can recommend the work as a book of reference, giving the most modern German views on Diseases of the Respiratory Organs.

R. DOUGLAS POWELL, M.D.

*Lectures on Clinical Medicine.* By Dr. McCALL ANDERSON, Professor of Clinical Medicine in the University of Glasgow. Pp. 268. London: Macmillan and Co. 1877.

There can be little doubt that the advancement of the science and art of medicine must mainly depend on the careful observation and recording of clinical facts, from a collection of which, broad, scientific, and practical truths may be deduced. The more exact and material spirit of the present day contrasts strongly with the dogmatic metaphysical doctrines of past centuries; and it is certain that the great strides in progress which our profession has made during comparatively recent times are chiefly due to the fact, that we have come to look upon medicine as a practical and rational art, and not as a mere hypothetical and empirical inquiry. The art of medicine, we maintain, is to be learnt at the bedside, where disease in all its forms appeals to our senses; its science is to be advanced by the patient and careful records we make of these observations, and by the scientific and logical deductions that we draw from them. However simple it may appear, it is a fact that, to observe correctly and to record such observations accurately, requires the highest knowledge and experience of our profession in all its branches; it demands an impartial spirit of research, and a scientific and rigidly exact frame of mind. These it is not the good fortune of every man to possess; and, should such exist, much patient and laborious work must be endured before any good fruits can be realised. The profession generally must therefore hail with expectant hope of interest and instruction a new work on Clinical Medicine; and, more especially as it is the production of one who, from his leading position as professor in one of the largest schools in the kingdom, has ample material for the study of disease, who must have matured experience, and, from the fact of his being a clinical teacher, should have acquired not only the habit of observation himself, but of imparting the knowledge he has acquired to others. Such an author is more than usually qualified to write a valuable clinical work, whose objects should be not only to instruct the reader, but to advance the knowledge of our profession.

The work before us by Dr. Anderson consists of a series of seventeen lectures, each containing, for the most part, the record of one or more cases, illustrating some form of disease, followed by a commentary. Taken in detail, these cases are accurately observed, skilfully recorded, and judiciously commented on. Considered, however, as a course of lectures, there appears to us to be a want of system or plan. The cases are apparently taken at random, without order or method. We imagine that, to pub-

lish a series of clinical lectures, there should be one of two objects—1st, either a collection of the more common forms of disease, so described as to prove practically useful to the student; or, 2nd, a series of important or rare cases, illustrating special features in pathology, symptomology, or treatment, more suited to the capacity of the seniors of our profession, and for the purpose of establishing and placing on record facts of original observation and research for the advancement of science. The work before us endeavours to combine these two objects. Some of the lectures deal with the most ordinary affections, with the opinion of different authorities, the author's included, thereupon, and therefore doubtless constituting excellent instruction for the student, but of no special interest to the profession at large, beyond the fact that every well recorded case of disease is to a certain extent an addition to our literature. On the other hand, some of the lectures deal with more advanced and original questions, which, if not appreciated by the ordinary student, are more suitable for the other object above mentioned. Each lecture in detail is well adapted for one or other of those purposes. Still we cannot but consider that the joining of these two classes of cases is a defect, if not the only serious one, in the work before us.

In his introductory lecture, the author points out the value of clinical instruction, and says that, "without desiring in any way to undervalue the importance of systematic lectures and of reading, it must be admitted that these are but sorry substitutes for bedside instruction." He meets his class three times a week. On two of these occasions he lectures in the class-room, and the third day is devoted to the exposition of selected cases in the wards. On the other days, a portion of his class accompanies him on his ordinary visit. He objects to large classes being taught in the wards, as it is hurtful to the patient, inefficacious to the student, and inconvenient to the teacher. For these reasons he adopts the above plan. The best method of clinical instruction, as he himself points out, is a matter of individual opinion; but it must be remembered that in Edinburgh, Paris, and elsewhere, large classes are taught in the wards with advantage to themselves, and without detriment to the patient.

Scattered throughout the work are some very important cases, of which the following are examples. In lectures viii and ix is described the treatment of aneurism of the arch of the aorta by galvanopuncture. The author employs a large-celled Stöhrer's battery, with needles insulated to within about half an inch of their points, by being coated with vulcanite, as recommended by Dr. John Duncan. The operation is performed as follows. "The skin at the edge of the aneurismal swelling having been frozen with ether, with the aid of Dr. Richardson's spray-producing apparatus, the needle connected with the positive pole was passed obliquely into the aneurismal sac. A zinc plate, connected with the negative pole, was then applied to the chest-wall on the opposite side, and about three inches beyond the edge of the swelling, a sponge, wrung out with warm salt water, intervening between the plate and the skin. The cells of the battery were then raised in the usual way, and the traveller pushed up, so as to bring four, six, or eight cells into use. When the operation was completed, the traveller was slowly pushed back, the zinc plate removed from the skin, and the needle extracted, a piece of plaster being applied over the puncture." The author employs the continuous current, although he admits that some-



times the induced has proved successful. The former acts by chemical and the latter by inflammatory action. The needle should be sharp, angular, and insulated, except at its point, the object desired being to act on the blood in the interior of the aneurism, and not on the skin and intervening tissues. One needle is generally sufficient, but several may be used if the tumour be large. If the needle be attached to the positive pole, small firm clots are produced; if attached to the negative pole, large soft clots are the result. The author finds that in practice the former is preferable. From four to eight cells may be employed, and the operation is continued from half an hour to an hour, and may be repeated seven or eight times, at intervals of a few days. The operation generally produces burning pain in the tumour, and stiffness at the root of the neck. Dr. Anderson gives in detail the reports of several successful cases of aneurism treated in this manner, which, he says, are the first on record in Scotland. There is also a well-executed coloured plate, showing the successful results at coagulation in a large aneurism of the aorta, treated by galvano-puncture.

In lecture vii there is excellently described a series of nervous symptoms, from which the author came to the conclusion that the patient was suffering from a tumour of the pons Varolii. The reasoning is ingenious, but, as the patient did not die, there was no means of confirming the diagnosis. Still, the case is a very interesting one.

There is another singular case of paralysis of the facial nerve, produced by the report of a cannon.

In lecture xi is reported a series of cases diagnosed as tubercular peritonitis, and in which recovery followed under nutritious diet, cod-liver oil, iron, etc.

Lecture xii is devoted to a consideration of acute phthisis. The author considers this to be a curable disease. He records several cases which were treated with feeding every half hour, stimulants, and a pill containing quinine, digitalis, and opium, every four hours. Hypodermic injections of one-hundredth part of a grain of sulphate of atropia, he says, controlled the sweating: subsequently, cod-liver oil was administered. Of one serious case treated in this way, the author says he was discharged "as healthy a lad as one could wish to see". Several other cases recovered. The author himself admits that, owing to the fact of recovery, there is no ocular proof that the disease in question was acute phthisis; but he does not hesitate to say that, whatever the disease was, the treatment "cured it".

In lecture xiv there is a disquisition on the cirrhotic form of Bright's disease, and there are plates showing the abnormal appearances of the retina in this affection.

Lecture xvi is devoted to skin-affections, and, among others, to a form of disease first observed by the author, and called by him *Lupus Verrucosus*. This always occurs in strumous subjects, and exhibits a warty formation in the surface of the skin. The disease is described in detail.

A. HUGHES BENNETT, M.D.

*Transactions of the International Medical Congress of Philadelphia, 1876.* Edited for the Congress by JOHN ASHHURST, Jun., A.M., M.D., Professor of Surgery in the University of Pennsylvania. Pp. 1,156. Philadelphia: 1877.

The varying character of the contents of this goodly volume is assigned by the editor in explanation of

some delay in its appearance. It contains all the general addresses, nearly all the papers read in the sections, and also abstracts of many of the discussions, with lists of officers and members, minutes of the general meetings, a history of its "inception", etc., and in fact everything required for a full and complete memorial.

For such of our readers as may not remember, we may say that the sections comprised Medicine, Biology, Surgery, Dermatology and Syphilography, Obstetrics, Ophthalmology, Otology, Sanitary Science, and Mental Diseases.

The eminent surgeon, Dr. Gross, presided, and most of the best names in America are represented more or less in the volume; and it is impossible within our space to do anything like justice to the immense mass of material collected. We will, however, offer a brief summary of it. Abstracts of many of the papers were published in the LONDON MEDICAL RECORD for November 1876.

Dr. Flint's address, reviewing mainly the progress of medicine in America, is exceedingly interesting, and traces the influence of French and English writing, as well as of American; this from personal recollection. "In the first half century of our national existence, the schools in Great Britain were chiefly resorted to. In the third quarter of the century those of France had the preference, and, in the last quarter, the German schools. . . . That our independence in thought and judgment has not been compromised, is shown by what I believe may be stated is a fact; namely, no one who has returned from abroad and remained a mere satellite of a foreign luminary, has ever attained to any great distinction in the minds of his countrymen."

Dr. Bowditch, treating of hygiene and preventive medicine, makes three eras of medical and social ideas during the last centenary: 1, 1776 to 1832, the era of theory and dogmatism (Dr. Benjamin Rush, Broussais); 2, 1832-1869, of strict observation, and of bold, almost reckless scepticism (Louis, Bigelow, Bartlett, Forbes); 3, from 1869 to 1876 . . . the noblest and most beneficent of all—viz., that in which the profession, joining with the laity, and aided by state resources, studies to unravel the primal causes of all disease, with the object of preventing it."

In the course of an exhaustive article, Dr. Bowditch publishes an analysis of replies from nearly three hundred representative medical men on questions of Public Medicine in their respective States.

Dr. Wormley, in his address on Medical Chemistry, summarises American contributions to modern materia medica, such as sanguinaria, sclerotine (pectic acid), lobelia, veratrum viride, podophyllum, hydrastis, cimicifuga, prunus, leptandra, rhus, gelsemium, etc., and adds various original remarks on mineral poisons.

Dr. Eve, discoursing on Surgery, revives the memories of Physick, Warren, Mott, Dudley, and others, and has no mean subjects for praise in the more modern work of Reid, Sayre, H. Green, Marion Sims, Bowditch, Van Buren, etc. "Dr. A. Hewson (Pennsylvania) found a mortality after amputation, performed with an ascending barometer, of about 11 per cent.; when it was stationary, 20; and when descending, 28 per cent." This certainly deserves further investigation.

In the address on Obstetrics, Dr. Parvin has an ample theme in the work of Shippen and Dewees, Meigs and Bedford, Hodge and Barker, Wight and Thomas, Sims, Emmett, Atlee, Peaslee, and many others.

Discoursing on Mental Hygiene, Dr. Gray takes an elevated tone, and his essay is one of the ablest and most interesting in the volume.

In the section on Medicine (President, Dr. Stillé), a very careful and well-argued paper by Dr. Lewis Smith concludes distinctly that "diphtheritic and pseudo-membranous croup are distinct affections". The former is constitutional, the latter local. The incubation of diphtheria is sometimes long, usually two to five days, or it may be a week (of which instances are given), and "it is a law in pathology that those specific diseases which have an incubation of several days are constitutional". Diphtheria occurs from primary blood-poisoning, rather than from a septic virus lodging on the tonsil. The rapidly fatal malignant forms, the state of the kidneys (albuminuria may begin the first day), the age, the contagiousness, and the histology of the exudation are all carefully considered. There is no definite microscopic difference between the membranes of croup and of diphtheria, but the former does not penetrate the mucous membrane, and the latter sometimes does. Discussion revealed the usual difference of opinion on the subject, but the tendency is clearly towards a conviction of the duality of the diseases. Dr. W. Pepper expressed himself as doubtful, but Dr. Hare (London), Dr. Bartholow, and others, strongly supported the dual view. The last-named physician, in the next paper, as to whether "the conditions of modern life specially favour the development of nervous diseases," adduces a good deal of curious proof from the ancients, and concludes, in a contrary sense to what is usually received, that they suffered rather more than we do. Dr. Gibbons of San Francisco presented the different aspect of newly settled countries. It seems probable that some special nerve-diseases have diminished, whilst others have increased.

An extremely interesting case of traumatic epilepsy is recorded by Neftel. It tallied with Westphal's experiments (those producing the malady in guinea-pigs by concussion the brain with blows), and an "epileptogenic zone" was present. The patient was relieved by the continuous galvanic current.

Dr. Denison of Colorado furnishes a most useful paper on the Influence of High Altitudes on the Progress of Phthisis. It is favourable, yet judicious, not exaggerated. He does not find hæmorrhage induced by height.

Dr. Lebert's paper on Gastric Ulcer strongly commends Nestlé's milk-food. Dr. Stillé spoke well of condensed milk, and Dr. J. W. Smith recalled "a case in which nothing could be retained but shavings of ice, cut with a plane."

Dr. Howard has a good article on Progressive Pernicious Anæmia. The treatment is not mentioned.

Dr. Ezra Hunt takes up the old, yet ever new question—Alcohol, as a Food and a Medicine, and gives conclusions, which were published at page 513 of the LONDON MEDICAL RECORD for 1876.

In the section on Biology (Dr. Dalton, President) there is an important paper on the microscopy of the blood. A diameter of  $\frac{1}{3230}$  inch is the average of 2,000 measurements of fresh human blood-corpuscles (Wormley), and from  $\frac{1}{3400}$  to  $\frac{1}{3700}$  inch after the shrinkage that occurs in dry stains (Richardson).

An exceptionally valuable essay is a continuation and corroboration by Dr. Austin Flint, jun., of his researches on cholesterine and on jaundice. He formulates the conclusions which were given in the LONDON MEDICAL RECORD for 1876, page 508.

In the section on Surgery (President, Mr. Lister) an important *resumé* of antiseptic work by Dr. Hodgen is followed by a full discussion and a special address from Professor Lister. The treatment of aneurism is discussed by Dr. Van Buren, and of morbus coxarius by Sayre, and subcutaneous section of the femur by Mr. W. Adams.

Dr. Hewson adduces ample proof of the production of analgesia, sufficient for many operations, by the simple process of rapid breathing, forty or fifty times in a minute, for from three to five minutes, and he concludes that it produces "diminished oxidation and decarbonisation of the blood".

In the section on Dermatology, etc., the President, Dr. White, has a carefully compiled paper on the Variation in Type and Prevalence of Skin-Diseases. He concludes that certain obscure affections, as prurigo, pellagra, lichen ruber, are practically non-existent in America. Certain other diseases connected with poverty and dirt, as animal parasitic diseases, are less prevalent in the United States than in Europe. Some grave affections are less frequent and of milder type, as lupus and syphilodermata. On the other hand, certain skin-disorders, especially of its glandular and nervous systems are more prevalent, as acne, seborrhœa, herpes, and urticaria. Dr. Bulkley alluded to a greater frequency of morphœa.

The last named physician writes fully on the question as to "whether eczema and psoriasis are local or constitutional disorders"; and, with certain modifying clauses, concludes in the latter sense. The paper is an able one, and should certainly be studied by specialists.

Dr. Heitzmann publishes a good formula for seborrhœa capitis, viz., R—Olei rusci crudi, 3 ss.; ung. aquæ rosæ, 3 iv; olei rosæ gtt. x, xx. Of this, a piece of the size of a walnut is rubbed into the scalp at night, and the head is covered. The ointment is removed in the morning by a cloth; twice a week a cold shower bath is ordered, and washing the scalp with soap and water. "After fourteen days the hair falling is stopped; in fourteen more, the seborrhœa is gone; in fourteen more, new hair grows."

Dr. Robert Barnes was chosen to preside over the section of Obstetrics, and Mr. Brudenell Carter over that of Ophthalmology, in each of which sections several admirable essays will be found. Otology and Mental Diseases provide also some useful contributions; while Sanitary Science is represented by papers on Disease Germs, on Buenos Ayres, on Quarantine, and on Pharmacy.

Reviewing the whole, we are struck with the large amount of valuable material collected, and the small amount of inferior work, and congratulate our *confrères* on the success of their labours. The editor may justly add, as he does with modesty, that "no pains were spared to render the visit of the delegates to the Congress a pleasant one; and there is every reason to believe the efforts were not unsuccessful."

E. MACKEY, M.D.

## NEW INVENTIONS.

### GALBRAITH'S HOT AIR BATHS.

We are very glad to see the tendency to extend the facilities for the use of the Portable Hot Air Bath as a medical agent. The clinical experience of medicines used as diaphoretics is very far from being satisfactory; they are uncertain, depressing, and of



mixed effect. On the other hand, the diaphoresis produced by the judicious use of the Hot Air Bath is instantaneous, profuse, and free from any complications arising from gastric disturbance with mixed effect of the drugs included in the range of diaphoretics, for the after-treatment of scarlatinal and other forms of nephritis, in the relief of pneumonic and renal congestion, in sun affections and rheumatic affections, and in many other cases in which diaphoresis is indicated. We believe that the Portable Hot Air Bath is destined to play a much more important part than even has been assigned to it. The baths made by Mr. Galbraith, Crawford Square, Londonderry, are very convenient and efficient. Portable, cleanly, and effective apparatus such as this, will do much to render this valuable means of treatment clinically available in ordinary practice.

### MISCELLANY.

**THE ROYAL INSTITUTION.**—Professor Garrod, continuing his course of lectures on the Protoplasmic theory of life, in speaking of respiration, drew attention to some few facts of practical importance which, though well known to physiologists, are too often disregarded by the public. The relative time occupied in inspiration and expiration is such that the carbonic acid breathed out to a distance is out of the way before the next inspiration, the air for which is drawn in from the immediate neighbourhood of the nostrils. The distance to which breath is exhaled through the nostrils is well illustrated by smoking through the nose. During the day our nostrils are kept clear of interference as we sit or walk; but at night bedclothing is apt to get so arranged as to retard the current of carbonic acid breathed out, and some of it is thus a second time inhaled, instead of the incumbent being, as it should be, of pure air. Another practical point mentioned was the importance of keeping the mouth closed, and of breathing through the nose in cold weather. Air should not reach the lungs at a temperature much below that of the blood, and air is much more warmed in passing through the nose-passages than in going directly from the mouth. In speaking of the evolution of carbonic acid, Professor Garrod mentioned a point which, he thought, had not received due recognition, which was that the "protoplasmic" vitality of the body led to the oxidation of pabulum supplied and the consequent formation of carbonic acid, just as muscular work, whether voluntary or not, produced a similar result. Pettenkoffer's experiments with men were illustrated, on a small scale, with a tame white mouse, in a glass vessel duly supplied with food, and a current of air so arranged that the carbonic acid breathed out by the mouse was collected in lime-water, so that the amount in a given time, and varying with activity or rest, could be estimated.

**THE NATURAL LANGUAGE OF THE DEAF AND DUMB.**—Professor A. Graham Bell read a paper on "The Natural Language of the Deaf and Dumb", at the Anthropological Institute, on March 12. The author stated that in most cases dumbness is merely a consequence of deafness, and does not arise from any deficiency of the vocal organs, but merely from the inability to acquire articulate language from want of means of imitating it. This can be supplied by teaching. The dogma "without speech, no reason" was well founded; deaf-mute children think in pictures. Thence they form a language of signs which, as contractions of it become understood, develops into a conventional language; but its extent is very limited. No deaf-mute has been found who had formed the idea of a Supreme Being. About the commencement of the present century, the Abbé de l'Épée opened an institution for the education of deaf-mutes. The tendency of the education therein given was to render the language more and more conventional by means of contractions. Of this Mr. Bell gave many inte-

resting examples. The result of systematic education has been to enable the deaf-mutes to form a community among themselves, using a real language representing abstract ideas as well as mere objects. Not only so, but the language has idioms of its own: for example, the objective case comes first, *e.g.* "the boots made the bootmaker". This is a difficulty, and perhaps a mistake in the education: it affords, however, a useful subject for anthropological inquiry into the analogy with the development of spoken language. In illustration, Mr. Bell gave the Lord's Prayer in the sign language. The North American Indians have a sign language, the same in character, but less developed, than that of the deaf-mutes. The language of the deaf-mutes is beginning to split into dialects.

**ACCIDENTAL POISONING IN ENGLAND.**—During the past year forty-one cases of fatal poisoning have been reported in one journal, which, though not presumed to be nearly all that have occurred in Great Britain, give some clue to the relative frequency of the fatalities from each substance, and include the most interesting cases. The cases have been: From arsenic, 1; atropia sulphate, 2; carbolic acid, 8; chloral hydrate, 4; corrosive sublimate, 1; cyanide of potassium, 1; an embrocation, 1; hemlock, 1; laudanum, 2; mercurial powder, 1; "nurses' drops," 1; opiate draught, 1; opium, 3; paregoric, 1; phosphorus paste, 1; prussic acid, 5; strychnia, 5; and teething powders, 2. Concerning these, it may be remarked that carbolic acid was administered for medicine three times in public institutions, and mistaken once for cough mixture, and once for water. The strychnia was in three cases taken in the form of vermin-killer, but in one had become mixed with santonin, and a similar accident had led to two cases of poisoning in Canada during the year.

**MORTALITY FROM CHOLERA AMONG THE PILGRIMS TO MECCA.**—Consul-General Schuyler reported (Feb. 21) to the Secretary of State at Washington, that there was great mortality from cholera among the pilgrims to Mecca. There were at that place, between December 24th and January 2nd, 787 deaths from cholera, and at Jeddah, the port of Mecca, between December 29th and January 6th, 1124 deaths. It is to be feared that, with the return of the pilgrims to their homes, the disease may reach Constantinople, where its ravages would be increased by the present wide-spread suffering.

**USES OF ANATOMY.**—Mr. Hensman draws attention, in the *Lancet* for March 16, 1868, page 405, to the uses to which a knowledge of anatomy may be applied. Stuart's clavicular wheel for carriages claims a great form of strength, coupled with lightness. It is strictly modelled after the human clavicle, that is to say, each spoke is curved precisely as the clavicle itself, and, true to his pattern, Mr. Stuart has flattened the outer curve, thus rendering the weaker one strong, to resist where the strain is heaviest. He has followed the shape of the inner curve, even in copying the ridges that bound the sub-clavid groove, and thus materially adds to the strength of the spoke.

**VERY OBLIGING!**—Another member of the lately-established Mutual Necropsy Society, in Paris, has died. This is the second member who has speedily fulfilled his pledge to the scientific world within a very short space of time.

**THE BREATHING OF PURE OXYGEN.**—The Royal Society of Göttingen has offered a prize for researches on the influence on the animal organism of breathing pure oxygen gas of density corresponding to ordinary atmospheric pressure. The experiments are to be made, as far as possible, on animals of various temperatures; and, while certain externally visible phenomena in the animal will have to be considered, special attention is desired to be given to the effect on the blood and on tissue-change (especially the excretion of carbonic acid and the character of the urine). The oxygen used should be carefully freed from all foreign matters apt to occur in manufacture; while a limited (and perhaps hardly avoidable) admixture of atmospheric nitrogen would not compromise the results.

# The London Medical Record.

## CASE OF POISONING BY CYANIDE OF POTASSIUM SUCCESSFULLY TREATED.

By Dr. MUELLER-WARNEK, Assistant Clinical Physician at Kiel.\*

THE subject of this case was a photographer in Weimar, Hugo G., aged twenty-four years. From his youth upwards he had shown an easily excitable and eccentric disposition. His father had committed suicide. About five years previously, owing to some trifling dispute with a woman to whom he was then attached, Hugo made an attempt on his life, and was only saved by prompt medical assistance.

On the evening of the 12th September he had had a quarrel, and parted in anger from another woman with whom he had then associated. Just before this he had been drinking a quantity of beer. On his return home, it was observed by some of his fellow-lodgers that he was unusually restless, walking up and down in his chamber before retiring to rest. The next morning he breakfasted as usual, but soon after that, was seen by a neighbour pacing up and down in his room with a torn letter in his hand. A fall was heard, and on the persons in the house rushing up, they found him lying on the floor in an unconscious state, holding in one hand a letter, in which the woman rejected him as a lover, and in the other a small bottle containing a solution of cyanide of potassium, such as is used in photography. A medical man who was called in sent him at once to the hospital, where he was placed under the care of Dr. Mueller-Warneke, about 10 o'clock a.m. In the meantime he had vomited, and the vomited matter had the smell of bitter almonds.

Dr. Mueller-Warneke thus describes his condition when admitted about an hour after he had taken the poison. He was a man of middle height, delicate frame, and weak muscular development. He was in a state of profound coma. The skin was cold, with a clammy perspiration; the extremities were cold, and the face greatly cyanosed. The eyeballs projected from the lids, and were directed upwards and outwards; the pupils were much dilated, and were quite insensible to light. The lower jaw was strongly fixed by spasmodic contraction; a frothy saliva, tinged with blood, issued from the mouth, and at each expiration there was a strong odour of hydrocyanic acid. In the mouth and throat there were distinct patches of ecchymosis, and on the gums a white mark of corrosion. The muscles of the extremities were quite relaxed, and there was an entire loss of sensibility and reflex irritability. With the exception of the trismus above-mentioned, there was no indication of convulsive action, either tetanic or clonic. The respirations were greatly reduced in number; they were deep and spasmodic, each occupying a long time, and they were accompanied by mucous *râles* in the trachea. The pulse was small, 120 in a minute, and occasionally intermittent. Auscultation revealed the presence of mucous *râles*

during breathing over the whole of the lungs. The impulse of the heart could not be felt, but the sounds were rhythmical and low, and the movements were irregular. The temperature of the body was evidently much lower than natural; it could not be determined until the patient had been an hour and a half in the hospital. It was then 36.2 cent., or 97.1 Fahr. While the patient was lying in this state, the urine passed off involuntarily.

Although, from the character of the symptoms, recovery from the effects of the poison appeared very improbable, means were immediately adopted to remove from the stomach any solution of cyanide that might remain, and at the same time to stimulate the action of the lungs. Sulphuric ether was hypodermically injected, and the stomach-pump used until the tepid water employed for injection came away entirely without colour or smell. The first washings of the stomach had a well-marked odour of hydrocyanic acid, and this was perceptible even after several quarts of water had been used. Altogether twenty litres of water were used in washing out the stomach. (As the litre is equal to 35 ounces, the quantity here used represents washing on a very large scale.) In spite of the ether injection, the breathing became more laboured and the pulse smaller and more irregular. Artificial respiration was resorted to, and ether, containing one tenth part of camphor dissolved, was hypodermically injected. In spite of this treatment, collapse appeared imminent.

It was now 11.30. The patient was placed in a hot bath, 33° R., or 106° F., and a stream of iced water was poured upon his head and neck from a height of several feet. The results of this treatment were very remarkable. On the first affusion of cold water a deep inspiration took place, and this was observed whenever the iced water came suddenly into contact with the skin. The breathing became gradually more regular and frequent, the pulse lost its intermittent character, and acquired greater strength. The eyeballs assumed a natural position, and the pupils had almost acquired their natural dilatation. Ether with camphor was again injected, the patient wrapped in blankets, and put to bed. At this time (12.30) he was in a state of complete somnolency. At 1.30 the breathing was free, and there were no mucous *râles* to be perceived. The temperature of the body was 37.4 cent., or 99° F. About 2.30 the patient was lying in a quiet sleep; he could be roused by a noise, as in calling him by name, but soon relapsed into sleep. Reflex action was manifested by the muscles; the number of respirations to the minute amounted to 20, the pulse was 85, full and regular. He retained some milk and wine which were given to him. As the whole of the region of the stomach was very tender, ice was applied to it. At seven in the evening (ten hours after taking the poison) consciousness returned, and the patient remembered what he had done before swallowing the poison. He now complained of severe headache in the occipital region, and of a lancinating pain in the region of the stomach. After he had swallowed two glasses of cold milk he again slept quietly. The temperature of the body, which at six o'clock showed a maximum of 38.6 cent. (about 102° F.), at eight o'clock, had again sunk to 37.8 cent. (99° F.).

The case progressed favourably, and the patient left his bed on the 17th September, the sixth day after he had taken the poison, his pulse, breathing, and appetite gradually improving. He suffered still from great weakness and depression. The urine which he

\* *Berliner Klinische Wochenschrift*, February 4, 1878.



passed was strongly acid, and contained much uric acid in a crystalline state. No hydrocyanic acid was found in it.

For a long time after recovery the patient walked with an unsteady gait. He suffered no pain, but he soon became tired. For more than two months he did not entirely recover his power of speech. This state of aphasia was still observable on the 24th November. Up to the time of his attempting suicide, nothing of this kind had been remarked.

Cyanide of potassium was detected in the fluids removed from the stomach by two processes. 1. Nitrate of silver produced a caseous white precipitate (cyanide of silver) which was entirely dissolved on warming the fluid. 2. Chloride of iron, green sulphate of iron (in solution) and solution of soda were added to another portion of the liquid contents until a precipitate took place. This, when warmed and treated with hydrochloric acid, produced Prussian blue.

[In general, this poison destroys life with such rapidity that a medical man has no opportunity of employing any remedial treatment. The treatment pursued here was efficient and satisfactory. It consisted chiefly in the entire removal of the poison from the stomach, and cold affusion to the head and spine. The very hot bath employed simultaneously may have been required by the state of collapse into which the patient was rapidly passing. Dr. Mueller-Warneke lost no time in looking about for chemical antidotes, but he took care, by the enormous quantity of water injected, that not a particle of the poison should be left in the stomach to be removed by the absorbents.]

Owing to a spasmodic closure of the jaws (trismus) there is, in general, on these occasions, great difficulty in using the stomach-pump. In one case of a woman who had taken a photographic solution of the cyanide, the loss of some teeth allowed the introduction of the tube within five minutes after she had taken the poison, but, in spite of this, she died in twenty minutes. The dose of cyanide was probably very large.

The quantity of cyanide taken by Dr. Mueller-Warneke's patient could not be ascertained, and the strength of the solution was not determined. As used by photographers, it commonly contains ten grains to the ounce. Dr. Mueller-Warneke states that it consisted of one part of cyanide to fifty parts of water, which would be of about the strength above mentioned; but how much of the solution was actually swallowed is unknown. The violence of the symptoms, and the time during which they lasted, showed, however, that a strong dose of the cyanide must have been taken, and there is every reason to believe that had this case been left to itself it would have soon proved fatal. A dose of five grains of the cyanide has destroyed life in three instances.—*Rep.*]

ALFRED S. TAYLOR, M.D.

#### LACASSAGNE ON ASPHYXIA FROM COAL-GAS.

ACCIDENTS arising from the breathing of coal-gas in a diluted state have been very frequent of late years. In a paper published in the *Tribune Médicale*, M. Lacassagne has directed the attention of medical men to this subject, inasmuch as it may give rise to some important medico-legal questions. The incipient symptoms may be of the most insidious kind, and the poisoning may take place very slowly.

In one case observed by M. Caussé there was no gas-jet in the room, but the gas infiltrated through the earth, and entered the room through cracks in the floor.

The first symptoms noticed under this form of slow poisoning are a feeling of nausea, headache, giddiness, with great muscular weakness and depression. These symptoms are manifested so long as the persons remain in the room, but soon disappear on removal into fresh air. Accidents of this kind generally occur during the night. The patients soon become unconscious. They try to get up, but in the effort they totter and fall. These cases must be regarded as representing mixed conditions of asphyxia and poisoning: the patients might in many instances be saved by a cry or a slight movement, but they are powerless to make the effort.

Pathological anatomy furnishes some important results. The skin presents in different parts rose-coloured patches; the mucous membrane of the air-passages is red and injected. The bronchial tubes are filled with a white froth in minute vesicles, having a slight sanguineous tinge. A section of the lungs shows a deep red colour. Devergie has noticed that a section of the liver presented a deep earthy colour. In addition to these appearances, there is intense congestion of the brain, with serosity in the ventricles. The nervous system of the spinal marrow is also gorged with blood.

These accidents from coal-gas are most commonly seen during winter, when there is usually the largest consumption of gas. They occur to persons while sleeping in bed-rooms, owing to leakage from gas-pipes or accidental infiltration from without. But, as gas is now largely used for warming apartments by burning it on a large scale in iron or fire-clay stoves, similar accidents may occur by day. M. Hudelo was called to examine an apartment thus heated by gas. He found the occupant suffering from nervous symptoms and general uneasiness; and the air of the apartment was rendered impure by the use of the apparatus. Instances of a similar kind are not unfrequent, and in the event of chronic poisoning or of asphyxia arising through imperfections in the heating apparatus, a claim for damages may be made, and medico-legal evidence required to support the claim. Such accidents, it may be observed, do not often occur, unless there is some defect in the apparatus.

In the first part of the paper the author describes the effects of unburnt gas, which is truly a narcotic poison, although it may produce some of the symptoms of asphyxia. The remarkable fact connected with its operation is its insidious effect even in a very diluted state in air. A proportion of about nine per cent. will prove fatal to man, but a much smaller proportion than this will produce somnolency and complete loss of muscular power.

Accidental leakage into bed-rooms may arise from a variety of causes—a defective pipe or jet; the withdrawal of pressure by which a gas flame is extinguished, and subsequently on the restoration of pressure the unburnt gas is forced into the room; a crack in a gas main near the house; infiltration through the earth from some distance; holes accidentally made during repairs in the tubes conveying the gas. By a proper research, the cause may be generally traced.

In gas apparatus used for warming, the noxious effects are due to the diffusion of unburnt gas and defective ventilation. Here the symptoms are somewhat different, and the person has the power of escaping.

ALFRED S. TAYLOR, M.D.

## ON THE USE OF THE NASAL DOUCHE.

By Dr. WEBER-LIEL, Teacher of Aural Surgery in the University of Berlin.\*

GENTLEMEN,—It is well known to you that, in many affections of the naso-pharyngeal region, frequent and careful cleansing of the diseased mucous surfaces from mucus and pus is a therapeutic desideratum of the first importance. It is not only desirable, but in most cases also necessary, that the diseased parts, which are with difficulty accessible to manual operation, should be more frequently exposed to the prolonged contact of medicated fluids than is possible under surgical management.

These requirements appear to be best complied with in many respects by Th. Weber's nasal douche. Many aural surgeons have already made extensive use of it, and the favourable results which have been obtained with it justify its constantly increasing application. Recently, however, a change has taken place in the views of many medical men as to its applicability, since the publication of a large number of cases in which severe inflammation of the ear with dangerous complications followed the use of Weber's nasal douche. It has been believed that the observations made showed that the cause of the inflammation was the penetration of the fluid injected through the nose into the tympanic cavity through the Eustachian tube. This danger, some say, is constantly present, and cannot be avoided, and therefore they throw aside the nasal douche altogether; other practitioners believe that they can prevent the passage of fluid into the middle ear by means of certain precautionary measures, and by means of modifications of the douche.

All the remarks that have as yet been made on the subject by American, English, and German practitioners have turned solely on the theme of the penetration of the fluid into the middle ear, and whether this is to be obviated or not. This, however, is not the sole and cardinal point of the subject which is being considered. On closer examination, it appears that there are two chief points, which must be kept separate one from the other:

I. The possibility of the passage of fluid from the naso-pharyngeal space into the middle ear;

II. The conditions under which the fluid that has passed into the middle ear gives rise to inflammation. I will show that this takes place only in certain conditions.

The passage of fluid into the middle ear depends—

a. Not on the nasal douche itself and the manner in which it is applied; but

b. On the condition of the lumen of the Eustachian tube, which canal varies greatly in different patients in resisting the penetration of fluid injected into the naso-pharyngeal space.

The conditions under which inflammation occurs after the penetration of fluid into the middle ear do not lie in this alone, but depend also, as I shall show, on—

a. The quality of the fluid used for injection;

b. The condition of the tympanic cavity and the state of the naso-pharyngeal space and Eustachian tube at the time when the injection is made;

c. The condition of the patient, not only during the nasal douche, but after its completion.

With regard to the methods of applying the nasal douche, it is sufficient to take notice of a few.

Of Th. Weber's nasal douche, the worst things have lately been told. Whether this be founded on the manner of its use or its peculiar action, can be determined by experimental observation alone.

I assume, gentlemen, that you are acquainted with Weber's nasal douche, and its use. In it we have to deal, not with a continuous stream of water, but with one which becomes weaker with the diminution of the pressure through the continual emptying of the vessel of water, and which acts in an intermittent manner, since the hand holding the tube is usually not perfectly quiet and steady. It is also observed that during the action of this douche the muscular structures which are within sight do not contract equally, but that the posterior arch and the velum palati are in a state of tremulous motion, of intermittent contraction. Since it is the levator palati which, as I believe I was the first to show, by its reflex contraction protects, like a wall, the entrance of the Eustachian tube against the passage of the fluid, we can understand that, at the moments when the muscular swelling is relaxed, the fluid, passing to some extent backwards through the nose, may penetrate into the tube. Besides, according to experiments which I, in conjunction with some of my pupils, have made on different kinds of nasal douche, it is scarcely possible to keep the douche in action from one minute to another without exciting an attempt or a desire to swallow. By this also an opportunity is offered for the opening of the orifice of the Eustachian tube; and, unless the douche be at once interrupted, fluid must enter the tube, and, if the pressure of the douche be continued, be forced into the middle ear.

This action, on the muscular structures, of the liquid flowing into the naso-pharyngeal space in an interrupted and intermittent manner, is observed also more markedly when, by means of Davidson's recently recommended douche (the *clyso-pump*), the fluid, drawn up from a vessel of water by the alternate compression and relaxation of an India-rubber bulb, is injected into the naso-pharyngeal space; with this there is still more opportunity for the ready entrance of fluid into the Eustachian tube. This form of the nasal douche, however, has the advantage that, by its more powerful action, it is better fitted for cleansing the affected portions of the naso-pharyngeal region. Its dangers are also decidedly diminished by the advice given by B. Fränkel, to cause the patient to sound the vowel *u, u, u* (English *oo*) aloud, before the stream of water begins to flow into the nose, and during the whole duration of the douche. By this act of phonation the levator palati is so energetically contracted, and the swollen belly of the muscle is so effectually applied to the pharyngeal mouth of the Eustachian tube, that, as it seems, the irritation of the intermittent stream of water can neither increase nor diminish this effect. Yet a slight excess of pressure of the bulb easily causes an unusual pressure of the water on the naso-pharyngeal space. If with this the closure of the naso-pharyngeal isthmus be relaxed, and the necessity for an act of deglutition be felt, a great effort and voluntary resistance on the part of the patient might, according to our researches, suffice at once to interrupt the douche at the right moment, without previously leaving off the act of phonation.

For some years, I have used the syringe only for injecting the naso-pharyngeal space. My naso-pharyngeal syringe is made of glass, so that it can be seen that the fluid contained in it is pure, and free from admixture of dirt; the cylinder

\* Read before the Hufeland Medico-Chirurgical Society. *Berliner Klinische Wochenschrift*, April 1.



holds just so much fluid as the naso-pharyngeal space in the adult is capable of receiving. Both ends of the syringe are of hard India-rubber; its point is olive-shaped, and at the lower end of the glass cylinder are two wing-shaped projections, on which the index and middle fingers are supported during the injection. The piston-rod is of metal, and ends in a ring, into which the thumb is introduced. While the injection is being made, the head is held and fixed by the operator's other hand in as upright a position as possible. The olive-shaped point of the syringe is introduced firmly and in a straight direction into the nostril which has been found to be least permeable by previous experiment (such as attempts at expiration in which the mouth and sometimes one, sometimes the other nostril, is closed, or exploration by the catheter): the fluid injection then meets with no impediment to its escape through the other nostril. You see, gentlemen, with what force I unhesitatingly empty the whole contents of this syringe at once into my naso-pharyngeal space, and how the fluid immediately escapes in a powerful stream through the other nostril. If, during the successive stages of the injection, you examine the condition of the palatine arches and the velum palati, you will find that the posterior palatine arches are suddenly put on the stretch and drawn together and towards the posterior wall of the pharynx, and that at the same time the reflex contraction of the muscular structure of the palate is so energetic, that it is drawn together in the form of a roof and raised with a jerk above the horizontal line, and applied to the posterior pharyngeal wall. No tremulous movements are observed, and at no moment are the parts unequally stretched, as is shown by careful observation to occur with the other methods of applying the douche. There is not here a series of unequal muscular contractions, sometimes stronger, sometimes weaker, as the result of a series of successive and intermittent irritations, but one simultaneous energetic contraction, the result of simultaneous powerful irritation by the discharge of the contents of the syringe in one stream. That the water does not enter the Eustachian tube in this operation is explained by the fact that, as soon as the simultaneous powerful irritation commences, so energetic a contraction of the levatores palati takes place that the orifices of the tubes are not only thrust aside, but perfectly stopped. If the injection be only made slowly and with slight pressure on the piston, this condition is less marked; on the other hand, the pressure of the column of water is less in proportion as the swelling of the muscles through their contraction is less effectual. The method of injection with the syringe has still another advantage over the other forms of nasal douche. By the use of this instrument, one is enabled to bring the fluid into contact with all parts of the naso-pharyngeal space, and to wash it out completely. By experiment on the dead body, I have convinced myself that, with Weber's nasal douche, the fluid reaches only the parts behind the posterior nares, and does not reach the fauces. You see, gentlemen, how I am able, by making a very moderate and slow pressure on the piston, to discharge the whole contents of the syringe into my naso-pharyngeal space, and to retain it there several minutes, if, during the injection into one nostril, the other be compressed.\* On inspection of the fauces,

it is observed that also in these circumstances the velum palati is so powerfully contracted and fixed, that no part of the fluid can escape into the lower part of the fauces; the patient is allowed to breathe quietly only, and speech is forbidden. If, at the moment when an attempt at swallowing is made, the pressure be taken off the nostril, the fluid at once escapes.

The nasal douche cannot be applied in the manner described, by means of the syringe, indiscriminately in all circumstances. In certain persons, the fluid passing through the nose enters the middle ear with relative ease, even when moderate force is used. This will be found to occur most readily when the velum palati is only imperfectly raised during phonation or deglutition. While the injection is being made it is difficult for the patients in question to avoid attempts at deglutition; and the water flows less through the other nostril than down behind the velum palati. Direct rhinoscopic examination, made on several patients during phonation, has taught me that, in these cases, with the imperfect closure of the naso-pharyngeal space is combined imperfect closure of the openings of the Eustachian tubes, on account of insufficient contraction and swelling of the levator muscles. On this ground, it is enjoined to avoid those methods of applying the nasal douche which cannot regulate and diminish the pressure of the stream of water so effectually as injection with the syringe.

Children have a very short and wide Eustachian tube. Here it is often observed that, even when little force is used in injecting into the nose, the fluid passes into the middle ear. Hence special care is to be taken here, although experience shews that in children the passage of fluid into the ear is seldom followed by symptoms of inflammation.

On the other hand there are numerous cases, and those in which the use of the nasal douche is most frequently indicated, in which even the most forcible injection with the syringe and also by the other methods, even though made not in the prescribed manner and without precaution, are not followed by any passage of fluid into the Eustachian tube. These are cases in which the Eustachian tube is not only collapsed through insufficiency of its muscular structure, but is swollen or narrowed in consequence of catarrh, as may be determined by means of bougies and the air-douche. This latter condition has not yet received attention, and yet it seems to me of especial importance in determining the question whether the nasal douche can be used without hesitation in any individual case, and in what manner it should be used.

A. HENRY, M.D.

[To be continued.]

## DE-PAOLI ON URINARY INFILTRATION.

In a memoir entitled *Esperimente e note cliniche*, published in Turin in 1877, Dr. De-Paoli treats of urinary infiltration, and his remarks on the subject are thus abstracted in *La Medicina Contemporanea* for March.

Eustachian tube. J. Gruber, twelve years ago, recommended this method of forcible injection with the syringe in order to introduce medicated fluids into one or both tubes, or to act medicinally on the naso-pharyngeal space. We use the injection by strong pressure with closure of both nostrils only in cases of loss of substance of the membrana tympani, in chronic cases, and find that it answers our expectations. The whole middle ear is cleansed of secretions, and the injected fluid escapes through the perforation. If care be taken to protect the patient from cold, we have never seen inflammation produced.

\* If, when both nostrils are closed, the fluid be suddenly forced by a strong pressure into the naso-pharyngeal space, it passed immediately into the middle ear, the pressure of the water overcomes the closure of the

A series of cases of urinary infiltration observed by the author in St. John's Hospital in Turin, in cases under the care of Dr. Berti, led him to undertake a careful study of this grave affection.

From experiments and from clinical observation, Menzel arrived at the following conclusions.

1. Normal acid urine does not possess the property of exciting inflammatory or septic action, and never causes sloughing by its chemical constitution.

2. It is impossible to obtain, by experiment, sloughing dependent on the pressure of urine infiltrated into the tissues.

3. Gangrenous inflammation occurs in the perinaeum, as in any other part of the body, as a result of contusion or of inoculation with septic matters. If the urethra be lacerated by such contusion, or subsequently become eroded, it is not to be wondered at that the urine should become mixed with the sanies, and that the compound thus formed should have the most pernicious effects on the life of the tissues and of the patient.

These conclusions appeared to Dr. De-Paoli to be contrary, at least in their absolute application, to clinical observation, and not to be supported by the experience of specialists of authority on the diseases of the genito-urinary organs. He therefore undertook a series of experiments on dogs.

In the first four experiments, acid urine (from 5 to 100 grammes) was injected into the subcutaneous cellular tissue. It was readily absorbed; there was a temporary rise of temperature of about one degree (centigrade) four or five days after the operation; and, on increasing the quantity of urine injected, its absorption was somewhat delayed, and the rise of temperature was increased by nine-tenths of a degree.

In the fifth experiment, he endeavoured to ascertain whether the urine was absorbed at the point of injection or first diffused to a distance. He injected 30 grammes of normal acid urine, coloured with aniline; and, on killing the animal twenty-three hours afterwards, was enabled to establish the fact that the urine, when it has once reached the subcutaneous cellular tissue, spreads to a great distance in consequence of the anatomical structure of the tissue.

In the sixth experiment, he succeeded in producing sloughing from infiltration of healthy urine in a quantity very large in proportion to the size of the dog, but without any contusion. The urine was introduced under the skin near the scrotum, by two injections made nearly in the same place. The local tumefaction did not disappear, and on the third day there was redness, with a rise of temperature to 40.2 cent. (104.36 Fahr.), and in the evening to 40.7 cent. (105.26 Fahr.). Soon a blue spot appeared, and a slough was formed, the removal of which gave exit to the accumulated fluid. On the fifth day the gangrene had extended; there was purulent keratitis of the left eye, and the temperature had fallen to 33.3 cent. (91.94 Fahr.). At the necropsy, besides pulsataneous gangrene of the whole skin and subcutaneous tissue in the region of the injection, foci of embolic pneumonia were found in both lungs.

In two other experiments, he made the injection into the muscles and into a sac formed by dissecting up the skin after incision; but the results obtained were not different from those of the first five experiments, except that the absorption was slower.

In a second series of experiments, Dr. De-Paoli studied the action of acid urine mixed with pus.

Into a rabbit of moderate size he injected a mix-

ture of 15 grammes of laudable pus from an abscess, and 40 grammes of normal acid urine. The rabbit died on the second day, with a fluctuating swelling at the seat of injection. On making a section at this point (the back) the subcutaneous tissue was found to be imbued with sanguinolent serum, to have a dirty grey colour, and to be infiltrated with a foetid gas. The process had extended to the abdomen, where the subcutaneous tissue was apparently reduced to a yellowish grey pultaceous mass. The sero-sanguinolent matter formed a collection as large as an orange.

In a second rabbit, about 35 or 40 grammes of urine with a purulent sediment, taken from a patient with chronic cystitis, were injected. The animal died on the morning of the second day after the injection. The subcutaneous tissue at the point of injection was found at the necropsy to be gangrenous, of grey colour, and charged with highly foetid gas.

In a last rabbit he injected 30 grammes of urine from a patient with acute cystitis. The animal died.

From these experiments the author is led to the conclusion that "normal acid human urine, injected into the subcutaneous cellular tissue of the dog, does not produce any local reaction, but only a general elevation of temperature, greater in proportion to the urine injected. Having reached the subcutaneous tissue, the urine is rapidly diffused over a rather large space, and is absorbed. If the quantity be very considerable in proportion to the size of the dog, it cannot be absorbed, and causes sloughing of the infiltrated tissues."

He then proceeds to criticise the opinions and experiments of Menzel on the action of urine on the tissues in urinous infiltration. He believes that Menzel's idea is untenable, that, in cases of urinary infiltration from wounds in the perineal region, the gangrene is always to be attributed to the contusion of the tissues. In urinary infiltration in man, the urine accumulates under special anatomical conditions in large quantity in circumscribed spaces, continually increases by the constant escape of more urine through the perforation of the urethra, and causes severe disturbances of the circulation in the infiltrated parts. It is not proved that, in man, excessive distension of the tissues by the urine is not capable of producing mortification, or at least of contributing to it, whatever other causes be added.

The contusion in traumatic rupture of the urethra with urinary infiltration, does not of itself produce primary or secondary mortification of the tissues, but contributes to it by impairing the circulation and the absorbent power. That form of laceration of the urethra which completely impedes the escape of urine from the meatus, and occasions a constant increase in the quantity of urine infiltrated, is the principal cause of mortifications of the tissues.

It is not necessary for the production of gangrene in spontaneous urinary infiltration that the urine should have an alkaline reaction; it is sufficient if it contain pus and epithelial elements in certain quantity. The putrefaction of the tissues with which such urine comes into contact often proceeds more rapidly than that of alkaline urine itself.

Having disposed of the experimental section, the author passes to the clinical part.

He endeavours to demonstrate that urinary infiltration sometimes follows slight alterations in the walls of the urethra, in some cases independent of stricture, in others associated with a not very severe or narrow stricture; that sometimes a passage into the tissues may be opened for the urine by simple



follicular catarrhal ulceration, or by an abscess of Cowper's glands. He also notices the transformation of peri-urethral abscess into circumscribed urinary abscess, and of both into true urinary infiltration.

Among the different clinical forms of urinary infiltration, he directs special attention to the immediate production of gangrene by the infiltrated urine. This, according to the author, is somewhat overlooked by writers on the subject, who in general assert that the mortification of the parts infiltrated by the urine is generally preceded by distant symptoms of inflammation. It cannot, however, be denied that in some cases the gangrene immediately follows the inflammation of urine. In a case observed by Dr. De-Paoli, the gangrenous spots appeared sixteen hours after perforation of the urethra: in a case of Chopart, related by Voilemier, they appeared after twelve hours. In both cases, the infiltration of urine was preceded by complete retention, the quantity of urine extravasated was enormous, and the part which was the seat of the infiltration was greatly distended.

In his last chapter, the author describes the treatment of urinary infiltration, and enunciates certain therapeutical precepts derived from the facts proved by him.

Experiment having shown that not only alkaline urine, but also acid urine mixed with pus and epithelial elements, has a destructive influence on the life of the tissues, he believes that it is no longer permissible, in a case of urinary infiltration, to trust to the alleged harmlessness of acid urine. To give exit to the urine infiltrated into the tissues and to that escaping from the perforation in the urethra, are the two indications which should guide the surgeon in the treatment of urinary infiltration. In urinary infiltration from traumatic rupture of the urethra, the danger to the life of the tissues is derived chiefly from the immediate and successive accumulation in them of a large quantity of urine, and only secondarily on the contusion of the parts. There is then a certain period of time, during which the infiltrated and contused tissues are still alive, and may be saved if the foreign liquid effused into them be removed. If the surgeon see the patient soon after the occurrence of rupture of the urethra and infiltration of urine, he may, by simply performing external urethrotomy at a point corresponding to the seat of contusion, provide a passage for the urine which escapes through the urethral perforation, and evacuate a large part of that which has been infiltrated and of the coagula of blood produced by the contusion. If the injury date back more than twenty-four hours, and signs of mortification have already appeared, external urethrotomy alone will not be sufficient, but it will be necessary to make incisions for the purpose of evacuating the altered urine as completely as possible.

The different clinical forms which urinary infiltration presents furnish occasion for special comments. Thus, in gangrenous abscess the incisions should be much more extensive than in common abscess, since, while in the latter the pus may be evacuated from parts at a distance from the incision, in the former the shreds of mortified cellular tissue require to be directly exposed and very carefully removed.

In cases of erratic erysipelas from urinary infiltration, early and free incision of all the parts attacked by the erysipelas will arrest the process and limit the destruction of the deep-seated tissues.

When gangrenous spots have already appeared, it is advisable to follow Professor Berti's plan of making the incisions through the spots themselves. It is, however, also necessary to make incisions into the parts infiltrated with urine but not yet gangrenous; in this way, the extent of the infiltration will be arrested.

When, after the detachment of the sloughs, the destruction of the parts continues to spread, especially in the subcutaneous cellular tissue, by a process of molecular gangrene in the parts which have evidently first been the seat of inflammatory action tending to limit the necrosis, extensive and copious incisions in a properly selected part, the application of drainage-tubes, and moderate compression, will limit the secondary loss of substance. Careful washing and injections with solution of carbolic acid, and perhaps also subcutaneous injections of a weak solution of carbolic acid at a distance from the incisions, may arrest the diffusion of the agents of putrefaction and the lesions caused by them.

With regard to the precept laid down by Flaubert, Guyon, and Martin, to wait a certain time (fifteen days at least) from the commencement of infiltration, before attempting to deal with the urethra, and to try to restore the normal passage of the urine, he claims for Professor Berti the honour of having followed this very useful practice before the above-named authors.

In cases where the perforation of the urethra has not been preceded by an obstacle of any kind, but where the destruction has been the result of sloughing, the urine may regain its channel in the natural process of cure without the intervention of art. When the portion of the inferior wall of the urethra is of a certain length, the introduction of a catheter three or four times a day will be useful, or it will be better to use it whenever there is a desire to pass urine (Thompson and Gosselin): to leave in such cases a large catheter permanently in the urethra is unnecessary, and may be injurious.

When the portion of the urethra in front of the perforation is the seat of stricture, the character and degree of the constriction will be the surgeon's guide in selecting the method of treatment. If the stricture be not very narrow, nor formed of a very great callosity, a cure may be effected by gradual dilatation, if the introduction of the catheter be borne well and do not give rise to febrile attacks. When the stricture is rather narrow, long, and callous, and when treatment by dilatation produces severe symptoms, Dr. De-Paoli prefers internal urethrotomy. External urethrotomy may be properly indicated in those cases of urinary infiltration in which, in consequence of the smallness of the urethral perforation, the patient cannot at all empty the bladder, and is exposed to all the dangers of retention in spite of deep incisions into the collection of urine.

The histories of nineteen cases, mostly occurring in Professor Berti's practice, are given. The following is an abstract of some of the most important.

Case 5 was one of sloughing abscess from infiltration of urine in consequence of follicular ulceration of the urethra in a gonorrhœal subject. Although a free incision was made in the perinæum, the patient died of septicæmia. At the necropsy, nothing was found but two punctiform solutions of continuity in the mucous membrane of the urethra (follicular ulcers), one four-tenths of an inch, the other an inch and four-tenths, from the prostate. The first led into a space in which, beneath healthy mucous membrane, lay a mass of gangrenous submucous tissue, which ex-

tended to some depth, but was separated from the mortified portion of the perinæum by a layer of healthy tissue. The other perforation passed in a direction backwards in the submucous tissue into an opening about an inch wide, which communicated freely with the mortified parts. The stricture was in the neighbourhood of the bulb, and was not very tight.

In case 6, the infiltration of urine took place very slowly, since most of the urine could still escape through the urethra, and the perforation was small. The tissues were not at once distended, but the urine was gradually diffused through them, forming gangrenous abscess here and there in its course. The patient recovered.

In the seventh case, a peri-urethral abscess was the cause of the effusion of urine; the patient died of pyæmia. At the *post mortem* examination, the wall of the urethra, eight-tenths of an inch behind the prostate, was found destroyed to some extent. This perforation led into a cavity which passed beneath the mucous membrane, and opened again into the urethra by an opening larger than the other. A channel beneath the urethra formed a communication between the abscess and the above-mentioned cavity.

In case 9 there was urinary infiltration from rupture of the urethra, accompanying fracture of the pelvis: the patient died on the third day. The *post mortem* examination showed infiltration of bloody urine in the scrotum and anterior perinæal region, complete laceration of the urethra in its membranous portion, extending more than an inch backwards, and communicating with a cavity full of clots and urine, in which the catheter introduced into the urethra was arrested; detachment of the ossa pubis at the symphysis; fracture of the horizontal ramus of the right pubic bone and of the ascending ramus of the ischium, and of the descending ramus of the os pubis on the same side; vertical fracture of the right ilium, etc. In this case, notwithstanding the enormous contusion of the tissues, the urinary infiltration had not produced mortification fifty-four hours after the injury.

Among the cases of urinary infiltration from urethral stricture, four were treated by internal, and three by external urethrotomy. External urethrotomy was also performed in two cases of urinary infiltration following contusion of the perinæum. Of the cases operated on, one only—external urethrotomy in a case of stricture—was fatal.

A. HENRY, M.D.

## MCKENDRICK ON THE ORIGIN OF GLYCOGEN AND DESTINATION OF SUGAR.

In a paper on Glycogen and Sugar published in the *Glasgow Medical Journal* for April, Dr. McKendrick says:—

Connected with the glycogenic function of the liver, many important questions arise; among which are: 1. What is the origin of glycogen; 2. What is the ultimate destination and use of the sugar formed from glycogen.

1. *The Origin of Glycogen.*—The amount of glycogen formed is largely influenced by the nature of the food. Carbo-hydrates, such as starch, are converted by the digestive fluids into glucose, which passes into the portal system. It may be conceived that in

the hepatic cells, dehydration takes place thus:  $C_6H_{12}O_6 - H_2O = C_6H_{10}O_5$ . This view is supported by the fact that the injection of sugar into the portal vein increases the amount of glycogen; but, on the other hand, it is well-known that the substance may be formed even after the rigid exclusion of all carbo-hydrates from the food. Glycogen may, therefore, be formed from other substances. Physiologists incline to the opinion that it may be produced either from fat or albuminous matters; but the observations on which this view is based are not either clear or precise.

2. *The Ultimate Destination of Glycogen.*—Glycogen has been found in the placenta, testes, brain, white blood-corpuscles, muscles, and in great abundance in the tissues of the embryo at an early stage. On the other hand, sugar has been found in the blood. Probably owing to the difficulties in the way of a quantitative estimation of the sugar in the blood, considerable difference of opinion has prevailed among physiologists regarding this point. On the one hand, Pavy has stated that the blood of the hepatic vein contains no more sugar than that of the portal vein; nor will he admit the assertion of Bernard, that there is less sugar in venous than in arterial blood. Whilst, then, Bernard's facts are disputed by so able and accurate an observer as Pavy, the matter must still be regarded as *sub judice*, and demanding fresh investigation.

Experimental physiology has enabled us to approach the subject from a different direction. If a solution of grape-sugar be repeatedly injected—in small quantities at a time—into the blood of an animal, no sugar makes its appearance in the urine—that is to say, sugar disappears in the body. Such a destruction of sugar probably takes place in the blood, lungs, and muscles. It is well known that blood containing sugar becomes acid, and that sugar gradually disappears as the acidity becomes more marked. From the fact that the quantity of sugar in the blood of the left heart is not much, if at all, less than that in the right heart, it is not likely that much sugar disappears in the lungs. As regards muscle, it has been shown that the blood returning from a muscle contains less sugar than the blood going to it. When muscles work, they become acid from the formation of sarcolactic acid. The question, then, arises as to the origin of this acid. Is it obtained from any of the albuminous constituents of the muscle, or from sugar? No chemical method is known by which lactic acid can be made from albuminoids; but it may be readily procured by the action of a ferment on grape-sugar. It has also been ascertained that muscles rendered acid by over-work speedily change grape-sugar into lactic acid when plunged into a solution of sugar. The inference, therefore, is, that there exists in living tissue some kind of ferment which converts sugar into lactic acid.

There is, however, a stage still further back which is of some importance. Claude Bernard's theory is, that the conversion of glycogen into sugar occurs chiefly in the liver, and that the sugar is washed away by the blood of the portal vein almost as quickly as it is formed. But, as already stated, the quantity of sugar in the blood of the vein is small. On the other hand, we find glycogen in the tissues, and more especially in muscle. It is possible, therefore, that glycogen may be converted into sugar in other places and tissues than in the liver.

I have frequently succeeded in obtaining glycerine-extracts of liver which convert starch into sugar.



In like manner, I have prepared glycerine-extracts of the tissue of lung, brain, spleen, and muscle, which sometimes had the same effect. Glycerine-extract of muscle rarely fails. With the view of working out this subject more fully, I am preparing at present similar extracts of many other tissues, and the result will be recorded in another paper. Meantime, there is sufficient evidence to show that a ferment, having the power of changing starch into sugar, exists in other organs besides in the liver.

### WIGHT ON INEQUALITIES IN THE LENGTH OF THE LOWER LIMBS, BEFORE AND AFTER FRACTURE.

In the *Proceedings of the Medical Society of the County of Kings*, for February 1878, is a paper by Dr. J. S. Wight, of Brooklyn, on inequalities in the length of the lower limbs before and after fracture of the femur. He begins by quoting a paragraph from a clinical lecture by Dr. F. H. Hamilton, in which that eminent surgeon disputed the correctness of a statement made by Dr. Wight, in a clinical lecture delivered at the Long Island College Hospital, and published in the *Archives of Clinical Surgery* for February 1877, "That nearly every person has naturally a shorter limb on one side than on the other, and that often, after fracture, we find apparent shortening where there is, in reality, none whatever, the fracture having taken place in the already short limb."

Dr. Wight's lecture contained the comparative measurements of the lower limbs of sixty males, and the following conclusions were drawn.

1. The lower limbs of the same person are not always of the same length.
2. The great number of the lower limbs, comparing the limbs of the same person, show a difference in length.
3. The left lower limb is oftener longer than the right lower limb.
4. About one person out of every five has lower limbs that measure the same length.
5. The difference in length of normal lower limbs of the same person varies in different cases—from one-eighth of an inch to one inch.
6. The measurements of the lower limbs of cadavers and skeletons confirm the above results.

In consequence of Dr. Hamilton's remarks, Dr. Wight has measured the lower limbs in forty-two additional persons. He says that, in measuring lower limbs, for scientific or surgical purposes, he insists on the following method. Apply the tape-line to the limb with the figures down, so that they cannot be seen; when the tape-line may be turned, and the length of the limb noted; then let go the line, and apply it in the same manner to the other limb; when the tape-line may again be turned, and the length of this limb noted. In order to insure accuracy of result, repeat the measurements several times on the same individual.

In measuring the lower limbs of his second series, he has made the under edge of the anterior superior spinous process of the ilium, at the insertion of the tensor vaginae femoris, the point of departure above. From this point he has made two sets of measurements, namely, one to the external malleoli, and the other to the internal malleoli. The measurements to the external malleoli accord with the plan of Dr. F. H. Hamilton.

Putting the two series of measurements together—making in all 102 cases—Dr. Wight arrives at the following conclusions, based on internal measurements of the lower limbs.

1. In each of twenty-three cases the normal lower limbs were equal by measurement.
2. In each of seventy-nine cases the normal lower limbs were unequal by measurement.
3. In twenty-seven cases the *right* lower limb was the longer.
4. In fifty-two cases the *left* lower limb was the longer.
5. The difference in the length of the normal lower limbs of the same person varies from one-eighth of an inch to one inch. One case had a *left* lower limb one inch and three-eighths of an inch longer than the right limb. Another case had a *right* lower limb one inch and one-half of an inch longer than the left limb.
6. In twenty-six cases there was a difference in the length of the lower limbs of one-half of an inch and more.

7. In nine cases there was a difference of more than one-half of an inch.

8. In one hundred and two cases, *the average difference, in length of normal lower limbs, is about one quarter of an inch.*

In corroboration, Dr. Wight quotes from his paper the following measurements of the two femora of the same skeleton. 1. The left femur, from the summit of the head of the femur to the base of the internal condyle, measured  $17\frac{1}{2}$  inches. 2. The right femur, from the summit of the head of the femur to the base of the external condyle, measured 17 inches. 3. From the summit of the left trochanter major to the base of the internal condyle, the *left* femur measured  $16\frac{1}{2}$  inches. 4. From the summit of the right trochanter major to the base of the external condyle the *right* femur measured  $16\frac{1}{2}$  inches. 5. The *left* femur weighed  $12\frac{1}{2}$  oz. avoirdupois. 6. The *right* femur weighed  $12\frac{1}{2}$  oz. avoirdupois.

In another skeleton the following results were found. 1. From the summits of the heads of the femora to the bases of the internal condyles, the *right* femur measured one half inch longer than the left. 2. From the summits of the great trochanters of the femora to the bases of the external condyles the *left* femora measured *one-fourth of an inch longer than the right.* 3. The *left* tibia measured three-eighths of an inch longer than the *right.* 4. The right and left fibulae were about equal in length. 5. The right femur weighed 14 oz. avoirdupois. 6. The left femur weighed  $15\frac{1}{2}$  oz. avoirdupois.

In speaking of the relation of this natural inequality of the length of the femora and the shortening after fracture, Dr. Wight says:—

Whatever appearance the facts of development may have to the sense and the reason, they must agree with other related facts—or rather, the accidental facts of injury will, when properly understood, conform to and not contradict the actual facts of development. The only difficulty that could arise, consists in not seeing the agreement and the conformity of the two sets of related facts.

In one set of facts we find a natural inequality of the length of the lower limbs, amounting to an average of one-quarter of an inch. In another set of facts we find shortening after treatment of fracture of the femur. The inequality in the length of the lower limbs, following the treatment of fracture of the femur, may be denominated accidental. It is not, in any sense, a question as to the accidental shortening

of the femur, which is proven by the experience of Scultetus, Chelius, Colles, Velpeau, Nélaton, Maligne, Sir Astley Cooper, Mott, Parker, Hamilton, Buck, and others; but it is a question of how much average accidental shortening the femur may have. Some say that the accidental shortening is from one-fourth to three-fourths of an inch; some say that the accidental shortening is one inch; some give the extent of the accidental shortening in particular cases; Dr. Hamilton estimates the average accidental shortening of the femur to be about three-fourths of an inch; Dr. Buck records the accidental shortening of the femur in 149 cases; those under fifteen years of age had an average shortening of three-eighths of an inch, and those over fifteen years of age had an average shortening of five-eighths of an inch. And various surgeons have reported cases in which there has been no accidental shortening of the femur.

Suppose we adopt five-eighths of an inch as an approximate standard of accidental shortening of the femur, the question is in regard to the relations of the natural and the accidental shortenings of the femur. How does the natural inequality affect the accidental inequality of the lower limbs?

If the longer normal lower limb have its femur broken, it is evident that the accidental shortening will not include the normal inequality, because the shorter normal lower limb has been made the standard of measurement. And if the shorter normal limb have its femur broken, it is also evident that the accidental shortening will include the normal inequality of the limbs, because the longer normal lower limb has been made the standard of measurement. In one case the natural inequality of the lower limbs has been added to the accidental inequality; and in the other case the natural inequality has been subtracted from the accidental inequality of the lower limbs. Now if we suppose, as we may well suppose, that the number of longer lower limbs, having the femora broken, and the number of shorter lower limbs, having the femora broken, may, in the "long run", be about equal, then the natural inequality would be added about as often as it would be subtracted; and, truly, that would not materially affect the average observed accidental shortening. Hence we may conclude that the average shortening of a broken femur is about five-eighths of an inch after treatment—that is, the best treatment, but we may also conclude that, under average treatment, the shortening of the femur will be, on the average, about three-fourths of an inch. In general it must be admitted that the left lower limb will afford more favourable cases, after fracture, of the femur, than the right; and that the left lower limb will be more apt to have an apparent elongation than the right, because it is oftener the longer limb, and because the extremely long limbs are, so far as we now know, commonly found on the left side.

The sound limb has been made the standard of comparison. Let us apply this standard to the 102 normal cases whose measurements are recorded in my two tables. Suppose the longer limb in each case to have its femur broken—or the equal limb to have its femur broken; then there would be an average shortening of five-eighths of an inch. There are only five natural inequalities in the 102 cases greater than five-eighths of an inch, viz., two of three-fourths of an inch, one of seven-eighths of an inch, one of one inch, and one of one inch and one-eighth.

Every practical surgeon knows how difficult it is

at times to obtain as little as one inch shortening after fracture of the femur—it is only possible by means of the maximum of extension; and he also knows how easy it is at times to prevent any shortening whatever, by means of the minimum of extension. The natural inequality of the lower limbs goes far to explain this important practical difference.

But there are cases in which the lower limb, whose femur has been broken, is longer than its associate, after treatment of the fracture. Cases of this kind will be found at times under the best and most thorough treatment of fracture of the femur, probably not under treatment which aims to make the lower limbs equal.

How often would we expect to meet a case in which the lower limb, after treatment of a fracture of its femur, would be longer than its associate? At present I have no means of determining accurately the relative frequency of fracture of the right and left femora. It has been assumed that they are broken equally as often, but in a general way I am inclined to the view that the right femur is broken oftener than the left; and if so we would not meet instances of longer lower limb after fracture as often as once in 100 cases. And if the longer normal lower limb were occasionally found on the right side that would make the chances still less; that is, under the most skilful treatment, we may expect only one case out of about 150 to show a longer lower limb, after fracture of its femur. But if we include all kinds of treatment, we may not expect more than one case out of 200 to show the injured limb to be longer than the other.

Dr. Wight then points out the bearing of this normal asymmetry of the lower limbs on the results of surgical practice and the reputation of surgeons, and quotes the following letter from his friend and former teacher, Dr. F. H. Hamilton—in reply to whose objections the present paper was written. He says that, in his judgment, it will do science and the profession a service to put it on record.

"New York, Jan. 1, 1878.

"MY DEAR DOCTOR,—I have done you and science an injustice, and I make haste to repair the wrong. Yesterday I, for the first, found time to verify, by actual observation, the correctness of your statement and that of Dr. W. C. Cox, of Philadelphia, that the femora of most adults are unequal in length. In a dozen or more measurements, made with great care by my house surgeon and by myself, a large majority were found of unequal length, and the left limb was generally the longest. I propose to extend my observations and to give them more precision, but I have made enough to satisfy me that you are correct.

"Permit me to add that you have in this matter, as well as in many other matters pertaining to the subject of fractures, made a most valuable and instructive contribution to the science of surgery and to medical jurisprudence. It is only by such careful observations that surgery is destined eventually to be accepted as a science as well as an art. As a contribution to medical jurisprudence, your observations, and the observations of those who have preceded you in these measurements, will do more than anything which has been before done to protect our profession against unjust prosecutions in this class of cases.

"Nevertheless, the fact remains that femora do generally shorten after fracture, since in nine cases out of ten it is the broken femur which is found the



shorter, *after* being broken ; but just how much it has shortened we shall now be unable to decide.

"You are at liberty, my dear doctor, to make whatever use you choose of this letter.—Very truly yours,

FRANK H. HAMILTON.

"Jarvis S. Wight, M.D."

In conclusion, Dr. Wight sums up as follows.

1. The greater number of normal lower limbs are unequal in length. 2. The left lower limb is oftener longer than the right lower limb. 3. The probable average natural inequality of the lower limbs is about one-quarter of an inch—perhaps a little more than this. 4. The probable average accidental inequality of the lower limbs, after good treatment of fracture of the femur, is about three-quarters of an inch. 5. The facts of development and the facts of accident are in accord. 6. There will be about one case in ten—or eleven—that will give lower limbs of equal length after treatment of fracture of the femur. There will be accidental inequality in the rest—that is, nine-tenths. 7. In every 100 or 200 cases, the lower limb whose broken femur has been well treated will be somewhat longer than its normal associate. This ratio is not surely fixed as yet. 8. One such case of apparent elongation after fracture of the femur may be expected to occur in the surgical service of a large hospital in a period of sixty years. 9. Most surgeons may not expect to see such a case in private practice, though it might fall to the lot of any one. 10. It is impossible for the surgeon to make lower limbs always of equal length after fracture of the femur. 11. The surgeon cannot be expected to make a bone longer than nature made it before it was broken. 12. One limb cannot always be the standard of length for its associate limb. 13. The only perfect standard of a lower limb of which the femur has been broken is the limb itself before injury. 14. In cases of doubt—or great accidental inequality—it is important to measure other corresponding normal bones of the same body, which may afford valuable information in regard to treatment. 15. So far as we now know, it is better to break the *left* than the right femur. 16. In treating fractures of the femur, common sense and the accepted rules of experience must guide our efforts. 17. The time may come when surgery will be an exact science, and be numbered among the highest arts. 18. Desirable results can be obtained only by learning and submitting to the facts. 19. A knowledge of the facts of asymmetrical development will tend to prevent suits at law for malpractice. 20. Judges and jurors must obey the mandates of science, and let the wrongly imperilled surgeon go free.

#### PROUST ON THE INFLUENCE OF OLD AGE ON MORBID PROCESSES.

In his *Traité d'Hygiène Publique et Privée* (analysed in the *Edinburgh Medical Journal* for March 1878), M. A. Proust says : "Old age creates certain pathological immunities. Charcot says : 'Eruptive fevers, typhoid fever, and phthisis are unusual in old age ; the importance of these immunities must not, however, be exaggerated, for they are far from being absolute, as Rayer has shown in respect to typhoid fever, Murchison in respect to typhus, and other authors in respect to other diseases. Who does not know that Louis XV died of smallpox at the age of sixty-five?' (*Leçons Cliniques sur les maladies des vieillards* : Paris, 1866.) Even when old people are

stricken by a common disease—by pneumonia, for instance—the manner of the evolution of the malady is different from that observed in the adult. Old age is characterised by deficient reaction, and, to use the happy expression of Charcot, the organs seem to suffer separately (*les organes semblent souffrir isolément*). It is also characterised by the frequency of the diseases which the old physicians called *latent*, meaning by that term that, though not passing entirely unobserved, they dissemble more or less in their manifestations, so that, to be discovered, they have to be sought for. Lobular pneumonia, so uniform and frank in the adult, both in its invasion and course in adults, progresses in a totally different manner in old people ; they have no initiatory shivering, no sharp pain in the side, no apparent dyspnoea, no expectoration, and hardly any discomfort, dryness of tongue, or loss of appetite ; they go about till within a few hours of their death, and physicians, unaccustomed to see the disease presenting these unusual features, are astonished to find at the autopsy an extensive suppurating gray pneumonia. Other examples are mentioned by Charcot. Biliary lithiasis, so frequent in the old, in place of manifesting itself in them by formidable hepatic colic, usually causes only a little pain in the liver, some vomiting, slight yellowness of the skin, with sometimes intermittent feverishness—symptoms more calculated to mislead than to put us on the way to a diagnosis. Cancer of the stomach and of the liver are equally often latent in the old, being unaccompanied by violent pain or vomiting. Saccharine diabetes may exist in old people without polyuria or thirst (Charcot, Bence Jones). The fever, when it does exist, is unattended by that turfescence of the skin, that acceleration of the circulation, that urgent thirst, and that intense sweating, which are, so to speak, its normal characteristics. It is in old people in particular, as Charcot remarks in the due course of the masterly description from which the above details are derived, that it is important to resort to thermometrical exploration, made as much as possible in the central cavities, to ascertain the existence and intensity of the febrile action. It appears, then, that the special characteristic of senile pathology, the direct consequence of the physiology of old age, is feebleness, atony in reaction, and, in a word, general torpor of the economy."

#### WEISS ON PSYCHIC EPILEPSY.

In the first number of the *Allgemeine Zeitschrift für Psychiatrie* for this year, Dr. Weiss, of Vienna, relates at some length five more cases of psychic epilepsy, with the object of dispelling all doubt as to the existence of this form of disease, and further, of supplying data, from which it may be seen what are its essential characteristics, and what merely accidental accompanying symptoms. Some of the points which the cases in question present in common are as follows. 1. The absence of attacks of muscular spasm ; even vertigo was very rare. 2. The forgetfulness, or, at most, only a dim recollection of the circumstances which had occurred during each attack. This is observed in ordinary epilepsy. 3. The periodical return of the attacks with the same or similar symptoms, also their rapid onset and cessation. These characteristics of an ordinary epileptic fit, when they occur in relation to a purely mental condition, justify the application of the term epileptic to that mental condition.

The circumstance that these cases are continually occurring, and that they have been described in connection with various other forms of disease, makes the repeated publication of illustrative cases desirable. It is only in this way that this, as well as the other various phases of epilepsy can come to be correctly understood and recognised. The author specially draws attention to the two cases now described by him as occurring in female patients, which, taken together with another previously related by him, show that, contrary to Samt's opinion, this form of disease is common to both sexes. Dr. Weiss's cases may be shortly summarised here.

CASE I. L. W., male, aged 39, was admitted with a history of three or four weeks' headache, forgetfulness, and nocturnal hallucinations. He was in a dreamy condition, and could give no account of himself. The most noticeable symptom was a disturbance of speech; the patient was unable to answer the simplest questions, as to his name, etc., until after a pause of twenty or thirty seconds. His usual answer then was, "I don't know." He spoke always in an under tone, and attributed his slowness in answering to his difficulty in thinking, owing to the persistent headache. He showed symptoms of strong congestion of the head, which were increased when he tried to speak. His movements were performed with difficulty; but without any appearance of paralysis. Pulse full and quiet. This condition of stupor lasted just a month after his admission. One morning he created surprise by appearing very excited, walking up and down, gesticulating: it was then found that he had large delusions, immensely over-estimated all objects and distances, and was totally colour-blind. He described all dark colours as dark blue, and all bright objects as very light blue. He remained in this state for five weeks, and then all at once became quite sensible. He was surprised to hear of his absurd sayings and actions, knew nothing of his behaviour, and was at a loss to understand how he came to be in an asylum.

Thus far the case seemed inexplicable; but the patient himself now gave the following history. His father suffered for  $7\frac{1}{2}$  years from fatal brain-disease; one sister died in an asylum; another committed suicide while insane; a third had been insane for several weeks, and her fifteen children had all died in infancy; a fourth is at present insane; a brother was always very morose, and was believed by the present patient to be "wrong in his head". Altogether, they were generally called in their native place "the mad family". The patient became blind for about six months, when four or five years old. He did not remember whether the blindness commenced suddenly. At 18, he was frequently thrown from his horse, but was never stunned by a fall. From this time he was always irritable, and in the ensuing summer suffered from headache, glimmering before the eyes, noises in the ears, frequent giddiness, and sleeplessness. At this time he believed, and stated, that considerable sums of money were owed to him. On the strength of this he borrowed money; but was discharged from the army in consequence. Four months afterwards he found himself perfectly conscious, with but a very faint recollection of the previous occurrences. He could not understand how he came to believe that others owed him money, as he had always been very close-fisted. He thought it better, however, not to tell any one that he had probably been insane. He now went to sea. For seven months he was perfectly well; but in the summer (June 1861) headache and excitability came on again. He tried to

jump out of a window, and was taken to a hospital, where he remained for four weeks, but had no recollection of what occurred while he was there. In 1862-3 he was comparatively well; but intense headache, noises in the ears, irritability, and cerebral congestion, did not fail to appear in the summer. In August 1864, when on shore for a few hours' leave, he suddenly saw a black figure appear before him. He seemed, moreover, to be standing on the sea-shore, although he was really 3,000 paces from it. He ran away terrified, spent the night ashore, and was punished in consequence, not daring to state the true cause of his absence. Even this transitory attack was preceded by the usual aura (headache, noises in the ears, etc.). In July 1865, he ran away from his ship without any cause, while in one of his attacks. In the two next summers he was again excitable, and at times "dangerous", being only partially conscious: for this reason he had again to change his employment. He entered the railway service; but in the summer of 1868, was discharged from it for making false accusations against others, after his usual premonitory symptoms. At home he became very violent and delusional. This attack lasted three months, and he had no recollection of what happened during that time. In the spring of 1869, W. went to work on another railway. In July the usual symptoms appeared: from that time he remembers nothing until September, when he "awoke". In May 1870, the prodromal symptoms again appeared. From June until October his memory is a blank. In June 1871, he had premonitory symptoms: in September he came to himself, finding that he was discharged from his employment, but without any recollection of the circumstances which had led to it. In the summer of 1872, he went to his mother's funeral. In September of that year he found himself charged with disorderly conduct, said to have taken place on that occasion. He was then, and still remained, quite unable to recollect any of the circumstances. In January 1874, intense headache caused him to leave his employment voluntarily. During the summer of that year he had cephalalgia, noises in the ears, sleeplessness, and quarrels with his wife, due to his groundless suspicions of her. The same symptoms occurred in 1875. In 1876 the case came under the observation of the author, and the account given above of the patient's condition fits in here. He was discharged in April 1877. In June the premonitory symptoms reappeared, and in August he was readmitted. He presented in a marked degree all the peculiar mental characteristics of an epileptic.

CASE II. This case is remarkable for a similarity in the character and course of each attack, which is almost monotonous. A. P., a Russian merchant, aged 42, gave the following account of his history. There had been no case of neurosis or psychosis in his family. Two years ago, without any apparent cause, he began to suffer from "nervous fever in the head"; since then, the disease had caused him always to be ill for half each month, and well for the other half. One day before each attack he always suffered from headache, loss of appetite, lassitude, and moroseness. On December 23rd, 1876, eighteen days after his admission, the patient showed the first symptoms of disorder. He was walking up and down, talking loudly to himself; when questioned, he only gave a short mumbling answer, and resented interference. On the 24th he remained in bed, was quite quiet and apathetic; his food had to be pressed upon him. On the 26th, he was quite cataleptic;



no reaction was caused by pinching or pricking him; he had to be fed and catheterised. This condition lasted until the 31st, on which day he commenced to eat, and pass his urine. On January 2nd, 1877, he was brighter, and gave short answers to questions. Next day, he was quite clear in his mind, and said that the attack was over. Until February 9th he was quite well; on that day, and the next, he had headache, and was morose. On the 11th, he was in a condition of stupor; 13th to 25th, he had catalepsy, retention of urine, abstinence, tympanites. March 1st to 30th, he was mentally well; on the 31st, he was morose. April 1st, stupor, tympanites; 3rd, catalepsy, abstinence, catheterism; 10th, brighter; 11th, mental condition normal; May 2nd, prodromal symptoms; 3rd to 17th, attack fully developed, with the usual characteristics. Subsequent attacks, exactly similar in their mode of onset, course, and termination, occurred from June 8th to 23rd, July 10th to 28th, August 7th to 17th, September 3rd to 28th. Within the following months the patient had eight attacks, exactly resembling the others, though the intervals at which they appeared varied somewhat. Their duration was from ten to twenty-eight days. In this case the short premonitory stage, and the direct recovery from the attack were characteristic.

CASE III. A. B., aged 28, labourer, was the son of a drunkard. At 13, he fell from a height, and was unconscious for several hours. At 19, he received a blow over the right frontal protuberance; the scar remained, and a shallow depression in the bone could be detected. After the injury he was insensible for ten hours; since that time he suffered from severe headaches, especially for the first year and a half. When the headaches were at their worst, the patient saw flashes of light before his eyes, and occasionally heard voices; but he always recognised these sensations as morbid. He never suffered from vertigo or loss of consciousness. At 23, after especially severe headache, he had a sharp maniacal attack, with hallucinations and delusions. It only lasted eight or nine days, and the patient had no recollection whatever of the occurrences of the last day of the attack, upon which he was extremely violent, forcibly removed to hospital, and placed in a strait waistcoat. Next morning, beyond being somewhat exhausted, he was quite well, and mentally clear. During the next three years the headaches continued, being very acute at times; attacks of excitement of very short duration, and without loss of consciousness, occurred occasionally. Six months before his admission he was suddenly attacked by hallucinations of sight while in bed, and wished to jump from the window. He lost consciousness until the following morning, when he was again quite well, after having been violently maniacal all night. Four days before admission, after severe headaches, he had again become excited, and had quarrelled with his relations; but he could remember nothing of this. On admission he was perfectly clear in his mind, and, remaining so for three weeks, was discharged.

CASE IV. K. B., female, aged 45, three months before admission received several severe blows on the head. For some hours afterwards she ran about crying, wailing, and excited. She broke a window, and tried to spring from it, so that the neighbours were obliged to tie her down. She was medically treated for several days; but her excitement quickly subsided, only leaving headache behind. Her only recollection of the occurrence was, that she had severe headache and wandered about restlessly.

Eight days before admission, she again became anxiously excited and violent, so that she had to be mechanically restrained. When admitted she was very excited, wailing, tearing off her clothes, wringing her hands, begging for mercy, etc. She passed a very restless night; but next night, though still somewhat depressed, was able to give a clear and coherent account of herself. The patient's intellect remained clear, and she became cheerful. She now had a severe attack of pneumonia, throughout which she remained perfectly quiet. Two months after admission, after recovery from the pneumonia, she had another attack of excitement, similar to that in which she was admitted: it lasted, with an intermission of forty-eight hours, for a fortnight. After remaining well another month, she was discharged. It was ascertained that she had another attack within a few months afterwards.

CASE V. B. K., female, aged 28, with no hereditary predisposition, had pneumonia at 17. In infancy, and again after puberty, she had a severe fall upon the head. On the latter occasion, she was unconscious for several hours. At 26, she had her first mental illness, consisting of maniacal paroxysms. These entirely disappeared after lasting seventeen days. Four months later, she had an exactly similar attack, which lasted twenty-one days. After another six months the disease recurred. From that time until her admission, seven months later, the "maniacal attacks periodically increased". On admission, she had hallucinations and delusions of persecution, etc., appeared anxious, and in a dreamy state. Next day, she made an attempt at suicide. Her condition of unrest, sleeplessness, and mental distress, remained unimproved for two days longer. Seven days after admission, she could converse sensibly, and employed herself. For three weeks she remained mentally well, and had only a very dim recollection of the occurrences during her previous maniacal attacks. In the following six months the patient had at least a dozen attacks of maniacal fury, lasting from half an hour up to a fortnight. Sometimes there were premonitory symptoms, and sometimes the attack was quite sudden.

The author directs attention to the following points in the above cases. Most of the patients had suffered from injuries to the head at some time previous to their mental troubles. The attacks recurred periodically at longer or shorter intervals, that is to say, the disease came on in *fits*. The patients had either no recollection at all, or only a very dim remembrance, of the occurrences during the attack, which shows that the attacks were accompanied by loss of consciousness in a greater or less degree. The seizures either commenced suddenly, or were preceded by symptoms which may be considered as constituting an aura; they nearly always ceased suddenly without any intermediate stage of recovery.

CHAS. S. W. COBOLD, M.D.

#### RIPPING ON PUERPERAL INSANITY.

THE following statistics and observations are quoted from a recent work by Dr. Ripping, in a review published in the *Irrenfreund* (1878, No. 2).

Of 780 female patients admitted into the asylum at Siegburg during the four years 1872-5, 168 suffered from puerperal psychoses in the widest sense of the term, *i.e.*, including the insanity of pregnancy and of lactation. This gives a percentage of 21.6, whereas that observed in eight other asylums varies between

7 and 16.8. The author attributes this fact partly to the greater frequency with which these patients are now taken to asylums instead of being treated at home, partly to the increasing accuracy of statistics, and partly to the faulty physical development of the women, especially those belonging to the manufacturing classes in the neighbourhood of Düsseldorf.

The 168 cases are divided as follows:—

Insanity of pregnancy ... 32 = 19 per cent.

Puerperal insanity proper 89 = 53 „

Insanity of lactation ... 47 = 28 „

In accordance with previous observations, melancholia was found to be the most frequent form of the insanity at its commencement; it occurred in 63.6 per cent. of all the cases; mania in 34.5. During the period of pregnancy, melancholia was still more common; it occurred in 84.4 per cent. of the cases; this form of psychosis was also seen in 68 per cent. of the cases of insanity due to lactation.

The author describes a number of cases in which two forms of insanity were combined, or rather followed one another; these he divides into four groups. 1. Melancholia followed by mania; twelve cases were observed; the two forms of psychosis were quite distinct, and lasted each about the same time. 2. Melancholia followed by delusional insanity (*Wahnsinn*); the latter does not succeed the former as a secondary form of insanity, but as a separate and independent affection. 3. Mania followed by delusional insanity, in which the delusions of persecution, etc., at first occasionally observed during the maniacal excitement, gradually get the upper hand, and, under the influence of hallucinations, become permanent. 4. Mania with subsequent melancholia; this is simply the reverse of the first group.

The author quotes his statistics, to show that the proportion of cases with hereditary predisposition differs so slightly from those without it, that it cannot be considered as having much to do with the causation of insanity in these cases.

Patients aged from 30 to 35 seem most prone to melancholia, while younger women are more frequently attacked by mania.

Prognosis is more favourable in puerperal cases than in all cases of insanity in women taken together; but the author's figures do not show so high a proportion of recoveries as has usually been given. He attributes this to a more strict distinction between cases discharged *recovered* and those only *improved*, than used to be the case. Of the patients suffering from mania, 62 per cent. and 33.6 per cent. of those with melancholia, recovered. The combined forms afford the least favourable prognosis; of the cases described above under the second group, not one recovered. Heredity does not appear to exercise any special influence on the prognosis. Figures show that the earlier the patients are brought under treatment, the greater is the percentage of recoveries. Subsequent attacks of insanity are always more favourable as regards prognosis than primary ones. The average duration of the attacks in the patients who recovered was—for melancholia ten months, and for mania seven months.

*Insanity of Pregnancy.*—The author finds that insanity is more common in the later than in the earlier months of pregnancy; in all the cases observed by him the patient's power of resistance had been diminished by hereditary tendency, previous attacks, disturbances of circulation or of the emotions. Illegitimate pregnancy is a very frequent cause of insanity; hereditary predisposition appears to have much more

influence at this time, than in the puerperal period or during lactation. The liability to insanity seems to diminish in each successive pregnancy. Of the cases of melancholia under this head, 58.5 per cent. only were pure melancholia, the remainder consisted of the combined forms commencing with melancholia. In subsequent relapses, the form of insanity which existed in the original attack is never repeated. The author confirms the statements of Leidesdorf and Holm as to the prognosis being very unfavourable in the psychoses of pregnancy; it is especially bad (1) when the attack comes on in the earlier months of pregnancy, (2) when there is hereditary predisposition, and (3) after 30 years of age. The percentage of deaths to cases was as high as 12.5.

*Insanity of Puerperal Period.*—The attack commences within a fortnight after delivery, and usually in the second half of the first week. Hereditary predisposition tends to bring on the attack earlier than would otherwise be the case; 29.2 of the cases occurred after the first labour. The author believes that complications, such as hæmorrhage, parametritis, etc., occurring during or after labour, are frequent causes of insanity; also grief at the death of the child. The pure forms of melancholia and mania are much more common at this time than the combined. Melancholia is most frequent after 30 years of age, also when the attack commences within the first few days after delivery. The percentage of recoveries was—of all cases, 46.3; of the cases of pure melancholia, 40.6; of mania, 54.5. Youth, the early outbreak of the disease after delivery, and timely removal to an asylum, are all favourable elements in the prognosis. The average duration of the attack in cases which recovered was eight months, against nine months in the insanity of pregnancy. The psychoses after abortion were most frequent in the second or third month of pregnancy; they generally occurred after free and persistent hæmorrhage in patients who were weakened by frequent pregnancies and enforced rest. The form of insanity and the prognosis are similar to those of the puerperal cases, but the great prevalence of hallucinations of sight, and the occurrence of local muscular spasms in the limbs without loss of consciousness, are noticeable peculiarities. The average duration of the cases which recovered was only five months, owing to the rapid disappearance of the anæmia.

*Insanity of Lactation.*—This most commonly commences in the second half of the second month after delivery or later, in patients whose powers have been gradually weakened by pregnancy, labour, puerperal troubles, and lactation. A rapid succession of labours, or prolonged rest, with affections of the generative system, predispose strongly to the attacks of insanity. Melancholia is by far the most common form of psychosis at this time. Neither age nor heredity seemed to play any important part in the etiology, but it was noted that the earlier the attacks commenced the more frequently were they in the form of melancholia. The prognosis is not so favourable as under the other heads, but fatal cases are rare. The tendency of the disease to pass into chronic delusional insanity, and the frequency of hallucinations of hearing, are very marked. The duration in cases of recovery averaged 9.5 months.

CHAS. S. W. COBBOLD, M.D.



## ANATOMY AND PHYSIOLOGY.

KEYT ON CARDIOGRAPHIC AND SPHYGMOGRAPHIC STUDIES.—Dr. A. T. Keyt, of Cincinnati, contributes an article to the *New York Medical Journal* of February 1878, devoted to the experimental observations on the velocity of the blood-stream, and the transmission of the various waves of the pulse. The observations are made by a combined sphygmograph and cardiograph, arranged so as to obtain simultaneous tracings of the heart and various arteries, or of two arteries alone. The instrument employed has already been described by the author in the *New York Medical Journal* of July 1877. The results obtained are the same in the main as those previously recorded by English observers, but appear more accurate and perfect in the registration of time than any previously published. From his observations, Dr. Keyt deduces the following corollaries concerning the rapidity of transmission of the pulse wave.

1. The rate of transmission of the pulse-wave along different portions of the arterial tree is not uniform, but considerably diverse.

2. The rate is minimum for the aorta, maximum for the arteries of the lower extremity, and intermediate for those of the upper extremity.

3. Along the same arterial line, the rate increases as the distance from the heart increases.

4. In the same healthy individual, in the same arteries the rate is subject to a limited variation.

5. In different healthy individuals, in the same arteries the rate is subject to marked diversity, of which the widest is in the aorta.

6. Both in the same and in different healthy individuals, the presphygmie portion of the systole of the ventricle is liable to considerable variation.

With regard to the time-relation of the three principal secondary waves to the beginning of the pulsation, of which they are parts, the following rules are laid down.

1. The interval between the beginning of the pulse and its acme of expression is the same in all parts of the arterial system.

2. In certain conditions of the vessels and circulation, the second wave keeps close time with the first in the onward flight, while in certain other conditions of the same the second falls notably behind the first in the progress from the heart.

3. The aortic wave rises later in the distal than in the proximal pulses, and latest in the pulse most distant from the heart.

[The first two of these rules require confirmation by more numerous observations. The third appears to be of great importance, especially when considered in relation to the theory of the peripheral production of the dicrotic wave, propounded by Dr. Burdon Sanderson, which it seems almost to negative.—*Rep.*]

F. A. MAHOMED, M.D.

LANDOLT AND CHARPENTIER ON THE RELATIVE SENSIBILITY OF DIFFERENT PARTS OF THE RETINA TO LIGHT AND COLOUR.—This subject has been investigated by Landolt and Charpentier (*Comptes Rendus*, 18 Février). They find that every part of the retina is equally sensitive to white light, in other words, that the minimum degree of luminosity required to excite a sensation is the same for direct and for indirect vision. In relation to monochromatic light, marked differences are observed. The yellow

spot region is capable of recognising coloured light of a very low degree of intensity. The sensitiveness of the retina to coloured light diminishes progressively from its centre to its periphery. A monochromatic impression, before it is recognised as such, appears to pass through a regular succession of phases, the first of which is a sensation of simple luminosity; this is followed by a period of hesitation as to the quality of the colour presented, which lasts until a sufficient increase in the intensity of the stimulus is attained. Whatever the colour employed, the same minimum degree of intensity is needed to produce the initial luminous sensation at any point of the retinal surface. Accordingly, since any stimulation of the retina, whether by white or by coloured light, is primarily followed by a simply luminous sensation, the recognition of colour always necessitating a certain augmentation of the stimulus; since, moreover, the minimum stimulus capable of giving rise to a luminous sensation is constant for the entire retina, while the minimum stimulus required to produce a colour-sensation increases from the yellow spot to the periphery, we may reasonably infer that the functions of perceiving light and recognising colour are distinct, both in their intimate nature and their localisation.

LUCHSINGER ON LOCALISATION OF FUNCTIONS IN THE SPINAL CORD.—Luchsinger has recently published three sets of experiments bearing on this subject (*Pflüger's Archiv*, Band xvi, Heft 9 and 10). The first is an application to the spinal cord of the well known method employed by Kussmaul and Tenner in their researches on the brain. When the posterior half of the cord is suddenly deprived of blood, by simultaneous occlusion of the abdominal aorta and the subclavian arteries, convulsions take place, strictly limited to the hinder part of the body. The second has to do with the vaso-motor apparatus. The rise of arterial pressure, which is produced by arresting the entrance of air into the lungs, is usually attributed to a stimulant effect of the non-aerated blood upon the general vaso-motor centre in the medulla. Luchsinger shows that spasmodic contraction of the arterioles may be produced by the action of venous blood on the spinal cord after its separation from the medulla, or after the functional vitality of the latter has been abolished, in consequence of ligature of the vessels which supply it with blood. This experiment affords proof of the existence of independent vaso-motor centres in the cord. Lastly, it is usually taught that in picrotoxin, the active principle of the *Cocculus Indicus*, we have a poison which causes tetanic spasms by its selective action on a hypothetical "convulsion-centre" in the medulla oblongata. Luchsinger finds that it may cause convulsions in a part of the body whose innervation is derived from the spinal cord alone, and concludes that its operation is not restricted to any single "convulsion-centre", but is coextensive with the motor elements in the grey matter of the anterior horns. The general inference from all the above lines of inquiry is that the proximate centres for all the functions of the trunk are situated in the spinal cord, and not restricted to its upper, highly specialised extremity.

VON TEUTLEBEN ON THE SUSPENSORY LIGAMENTS OF THE DIAPHRAGM.—In an article in the *Archiv für Anatomie und Entwicklungs-Geschichte*, 1877, Heft 3 and 4 (abstracted by Dr. Dwight in the *Boston Medical and Surgical Journal*) Dr. E. von

Teutleben has described more thoroughly than has been done the series of fibres by which the centre of the diaphragm is united with the pericardium and restrained from descending, and has traced them to their origin from the spinal column. Béraud, in a passage which Von Teutleben quotes, says: "The uses of this superior ligament of the pericardium appear to me to deserve the attention of physiologists. It holds the pericardium firmly, and prevents its descent, so that the name of 'hollow tendon of the diaphragm', which MM. Beau and Maissiat gave to the pericardium, appears to us perfectly justified. In fact, by means of this insertion, the diaphragm has a solid point of support from the pericardium, which, as its descent is limited, will prevent too great a displacement of the partition between the thorax and abdomen." As described by Von Teutleben, the ligament of each side may be divided into an upper and a lower part. The latter consists of a strip of fascia springing from the tendinous centre of the diaphragm, lying on the pericardium, and reaching the root of the lung. The upper part arises from the last cervical and first dorsal vertebrae, sometimes from several more, and as it descends it splits into two layers, of which the more superficial surrounds the great vessels and passes into the pericardium, while the deeper goes to the trachea and root of the lung, sending, however, fibres into the pericardium. Thus it appears that the functions of these ligaments are not only to hold up the centre of the diaphragm, but to support the thoracic viscera and protect them from too great motion.

**ALBERTONI ON THE VITALITY OF BLOOD AFTER TRANSFUSION.**—As a result of many experiments upon this subject, Professor Albertoni (*Archivio Italiano*, 1877) finds that transfused blood from an animal of the same species takes its part in the nutrition of the tissues, but that blood from a different species does not do so. In the latter case, the blood-corpuscles become softened and disintegrated, their colouring matter passes off with the urine, while their stroma forms stases in the capillaries, rendering them impervious, and thus leading to severe complications, or even death.

C. S. W. COBBOLD, M.D.

#### RECENT PAPERS.

On the Incrustation of Blood-Corpuscles in the Normal and in the Pathological State in Adults and in Children. By MM. Bouchut and J. Dubusay. (*Gazette Médicale de Paris*, April 6.)

#### MEDICINE.

**SOMMERBRODT ON NARROWING OF THE LARYNX BY MEMBRANOUS CICATRICES FOLLOWING SYPHILIS.**—In a paper in the *Berliner Klinische Wochenschrift* for April 1st, Dr. Sommerbrodt, of Breslau, strongly opposes the statements of Kaposi regarding the extreme painfulness of syphilitic ulceration of the larynx. He rather regards the almost entire absence of pain in laryngeal ulcers as diagnostic of syphilis, seeing that cases have often occurred where the entire epiglottis was destroyed by ulceration, while the patients complained of little more than discomfort in the throat; or that, in cases of cough and supposed lung-disease, the only discoverable disease consisted of a deep ulcer and defect of the epiglottis;

or lastly, that, with extensive ulcerations of the vocal cords, the only symptom was a certain rough hoarseness of the voice. On the other hand, he regards exquisitely painful ulceration of the larynx and epiglottis as pointing rather to phthisical affections. The absence of pain in syphilitic ulcerations of the larynx may indeed lead to the danger of their being overlooked or neglected, though this risk is somewhat compensated by the tendency of these ulcers to heal spontaneously, without any permanent bad results, excepting a certain functional derangement of the voice. The number of cases is, nevertheless, considerable, in which serious injury to the larynx remained even after a radical cure of the original disease. Of these, the most interesting and important are those instances of membranous cicatrices stretched across the laryngeal tube; since, on the one hand, they involve the gravest disturbance of the laryngeal function, and also, on the other hand, admit of operative interference. The entire number of cases of this kind on record amount to 22—of these, six are described by Elsparg of New York, while eleven are reported from the south-east of Europe, and the remainder by various writers. It is somewhat remarkable that three-fourths of the European cases occurred in the extreme east, showing the natural indolence and apathy of the inhabitants of those regions, who only seek aid when affected with grave disorder, especially if the attendant pain be inconsiderable. Thus, the first case observed by Türk (*Krankheiten des Kehlkopfes*, 1866, p. 408, 409) was that of a man who, for three years previously, had been the subject of syphilis, and in whom the nasal bones had fallen in, and the uvula and a large portion of the soft palate had been destroyed, while the vocal cords had become connected by a membranous cicatrix to such an extent that there remained in the posterior portion of the rima glottidis only a small round opening, not much more than one-tenth of an inch in diameter, for the admission of air.

In the case described by Dr. Sommerbrodt himself, the patient, a woman, aged 36 years, came under treatment on January 16, 1877. She began to suffer 18 months before this from a painful affection of the throat, with great dysphagia; then hoarseness supervened, and latterly, increasing dyspnoea, which interfered with her occupations. The cervical glands on the left side were indurated, the pharynx was normal, and her general health fair. The epiglottis was strongly reddened, the false cords were injected and ulcerated near the anterior commissure, while their jagged edges, to the extent of about one-eighth of an inch, were in close contact; from below, the oedematous mucous membrane projected over the remaining portion of their free border. The voice was very husky, and there was considerable dyspnoea on walking, etc., while the arytenoid cartilages on both sides were movable. The case was evidently syphilitic in its nature; a view confirmed by the results of treatment. The patient was put upon potassium iodide, and after eight days the mucous oedema and injection had greatly diminished. In fourteen days the commencing union of the true cords at their anterior third became perceptible. After six weeks, it was seen that the true vocal cords were united by means of an uniform white and tense membranous cicatrix, with a free and very thin posterior margin, and on its upper surface two minute blood-vessels ramified, emerging from the commissure. When phonation was attempted, this membrane was folded downwards, so that the arytenoid cartilages



became closely approximated. The dyspnœa now became much less, though the free space between the laryngeal wall and the free margin of the membrane continued extremely small—about the tenth of an inch—and the patient could resume her occupations; there remained, however, complete aphonia. The patient took 616 grains of potassium iodide (40 grammes) during the first six weeks; it was then discontinued, and during the last five months her condition has remained stationary.

In narrowing of the larynx by membranous cicatrices, the voice is always impaired, and there also always exists dyspnœa; but the latter is not always in direct proportion to the extent of the membrane and the consequent contraction: for we have in some cases excessive occlusion (stenosis), with but slight dyspnœa, owing to the influence of habit and the slowness of the process; while in others, dyspnœa may be intense, with only slight narrowing, but supervening rapidly. In the present case, the considerable concentric swelling of the laryngeal mucous membrane was a fertile source of dyspnœa, which diminished as the swelling subsided. The true cords are, in most cases, the seat of these membranous cicatrices, by which they are either partially approximated or wholly united, so that they become nearly obliterated. The opening left by the membrane is mostly situated in the posterior portion of the glottis, and is rounded or semilunar. In one case (Navratil) the opening was situated in the middle of the membrane. As to the origin of the membrane, it is always the result of the healing of ulcerated and opposed surfaces coming into more or less continuous contact, be the healing spontaneous, or the result of appropriate treatment. The actual process of the formation, and the time occupied thereby, have only been observed once before, and in the present case. In the former case, described by Rossbach (Langenbeck's *Archiv*, vol. ix), there was syphilitic ulceration of the cords near the commissure, and about the right arytenoid cartilage. Under treatment, the ulcers healed; but within eight days the cords became united by a membrane in their anterior two-thirds. In the present case, the anterior third of the cords was united after fourteen days' treatment, and the union became complete after five or six weeks. It will, therefore, always be a matter of practical importance in the treatment of syphilitic cases to institute an energetic and rapid anti-syphilitic treatment on the first appearance of redness and swelling about the anterior commissure of the vocal cords: for if ulceration have once commenced, more or less extensive union is almost necessarily a consequence of cure. If cicatrization and union have actually taken place, the only alternative of operative treatment remains. The division of the membrane may be effected by means of a fine probe-pointed bistoury. But a simple incision is followed in many cases by only temporary results. The galvanic cautery, or caustic potash, will probably be found more effectual in procuring a permanent destruction of the membrane, but even the most favourable result will scarcely obtain a restoration of the voice; dyspnœa will, on the other hand, always be removed. The patient in the present case has not consented to an operative treatment; want of voice being her only affection, and to this she attaches no particular value.

SOMMEBRODT ON A FORM OF SUBMUCOUS LARYNGEAL HÆMORRHAGE NOT HITHERTO OBSERVED.—In the *Berliner Klinische Wochenschrift* for

April 1st, Dr. Sommerbrodt remarks, that hæmorrhage in cases of acute laryngitis is not rare; such cases being described by Dr. Fränkel as laryngitis hæmorrhagica. But the following case is unique. A girl, twenty years of age, presented herself in January last, with the statement that, about two hours before, she had, while eating, swallowed something which, she said, had stuck in her throat, causing a pricking pain about the larynx and much discomfort, and that all efforts to remove it, by swallowing bread, etc., had been futile. On examination, there was found projecting into the pharynx from the posterior laryngeal wall a dark, rounded body, of the size of a cherry stone, while all surrounding parts were perfectly normal. It was soft and firmly adherent to the interarytenoid space, and its manipulation under examination caused no pain. On opening it with a bistoury a quantity of dark blood flowed out, and the swelling disappeared. It was, therefore, a submucous blood tumour of the posterior laryngeal wall, simulating a foreign body. Its origin was due, probably, to bruising of the mucous membrane through swallowing a hard morsel. Similar cases sometimes occur of blood-tumours of the buccal mucous membrane through bruising by the teeth.

LEONPACHER ON THORACENTESIS.—Dr. Leonpacher observes (*Aerztliches Intelligenz-Blatt*, April 2nd), that the operation of thoracentesis has greatly increased in value, in consequence of the labours of Kussmaul and Bartels (in Germany), and it is now resorted to by many. Dr. Leonpacher gives an account of several cases that came within his own experience. The first two in which the operation was performed died, not in consequence of the operation, but from marasmus and the accession of tuberculosis; the other three cases ended favourably. Of these, the first was the case of a brewer, aged 33, the subject of pleurisy on the right side, resulting in empyema. The thorax was punctured and a quantity of inodorous pus removed. Subsequently, the thorax was again punctured, and now the secretion was ichorous, and could be only partially removed by the suction process. An opening  $1\frac{1}{2}$  inches in length was therefore made in the fifth intercostal space, and a large quantity of bloody purulent and fetid exudation was withdrawn. The cavity was daily irrigated and washed out with a 2 per cent. solution of carbolic acid, through two Nélaton's catheters, one for the injection, the other for the exit of the fluid. Afterwards, one of these was found sufficient for all purposes. The cavity gradually contracted, the secretion diminished, and the wound was now allowed to close. The temperature immediately rose to  $104^{\circ}$  F., and four days afterwards a violent fit of coughing again opened the wound, through which a large quantity of offensive pus escaped. The catheter was again introduced, and was retained at first in the cavity, and afterwards in the remaining sinus for several weeks, while carbolic solution was daily injected. The case did well, and recovered completely.

The second case was one of traumatic pleurisy in a young man, following a blow on the chest. For two years a fistulous opening existed on the left side, below the nipple, which discharged almost continuously a purulent secretion, and through which the pleural cavity could be reached. A drainage-tube was inserted, and about seven ounces of offensive pus flowed away. The cavity was twice daily washed out with a solution of boracic acid (3 per cent.), and the tube was left in the wound, which was dressed

with tow dipped in boracic acid. Instead of the boracic acid, an aqueous solution of 2 per cent. of tincture of iodine was occasionally employed.

The third case occurred in a farmer, who had suffered for two months from exudative pleurisy. An abscess had formed on the right side, between the angle of the scapula and the spine, from which flowed, on being opened, a large quantity of healthy pus. From this abscess a canal ascended behind the right scapula to the height of the spine of the scapula, and there communicated with the pleural cavity. As for purposes of treatment this canal was unsuitable, and as, moreover, at the site of the abscess the intercostal space was too narrow to admit the introduction of a tube, the thorax was opened in the fifth intercostal space, between the axillary and mammillary lines, and a further considerable quantity of matter removed through it. Under continued injection of salicylic acid solution and dressings, the case did well.

The main points to be observed in the treatment of cases of thoracentesis are—1, the complete removal of the purulent secretion from the pleural cavity; 2, a continuous outflow of pus as it forms; 3, the total exclusion of all septic matter from the wound, and the arrest of the septic process if it have already commenced. The first point is secured by inserting through a cannula a Nélaton's catheter into the bottom of the cavity, and through it injecting the various antiseptic solutions in use. It is sufficient to employ one catheter instead of two, as recommended by Fräntzel. The injected fluid renders the secretion of the cavity thinner, whereby its subsequent removal by means of the syringe is much facilitated. The patient should be placed on his back, and with the pelvis higher than the thorax, and the opening on as low a level as possible, and the discharge of any fluid is further aided by coughing or strong expiration; the catheter is then withdrawn, and the cannula left in the opening. To prevent the access and entrance of dust, etc., a dressing of salicylic lint, or tow, which is cheaper and equally efficacious, should be applied over the wound, so as to cover the cannula or drainage-tube.

Dr. Leonpacher concludes his paper with an account of a case of a penetrating wound of the thorax and right lung, in which he had ultimately to perform thoracentesis, owing to the accumulation of sanguineous pus in the pleural cavity. The treatment in this case was that recommended recently in the *Berliner Klinische Wochenschrift*, by the chief surgeon of the Danzig Hospital. It consisted in inserting at once a large sized drainage-tube into the wound, and allowing it to remain there during the progress of the case, while the antiseptic injections were employed only at the commencement, and afterwards resumed only on the appearance of any signs of decomposition in the discharge; at the same time, the antiseptic dressings were more frequently changed. Under this management, the progress of the case was a remarkably rapid and favourable one.

W. J. TREUTLER, M.B.

CARRESCIA ON A CASE OF HEPATIC ABSCESS OPENING INTO THE LUNG: SUCCESSFUL TREATMENT BY CARBOLIC ACID.—Dr. P. Carrescia relates, in *Il Morgagni* for December 1877, the case of a man who, having suffered for a long time from a malarial affection, was suddenly attacked with vomiting of pus, due, without doubt, to the bursting into the bronchi of an abscess of the liver. In these circumstances, Dr. Carrescia, remembering the re-

markably beneficial effects of carbolie acid in suppurative pneumonia, was led to employ it as a disinfectant and modifying agent on the abscess. After sixteen days of treatment by the daily administration of from 15 to 40 drops of a solution of carbolie acid [of what strength?], the patient gradually completely recovered. The author does not overlook the fact that abscess of the liver may heal spontaneously; but, in the present case, the rapid diminution of the pus, the absence of pain, and the improvement of the nutrition, appear to him to render the effect of the treatment undeniable. He concludes, therefore, that the internal use of carbolie acid in abscess of the liver may exercise some special action such as has already been described in suppurative pneumonia, and expresses the desire that the value of the treatment may be tested by clinical observation.

A. HENRY, M.D.

TEBALDI ON THE TREATMENT OF CATALEPSY.—Dr. Tebaldi relates the following case (*Archivio Italiano*, 1877, Nos. 2 and 3). A student, aged 22, the son of very nervous parents, after severe and persistent study of law, philosophy, theology, etc., fell into a condition of ecstasy, catalepsy, and stupor. He was treated by Dr. Tebaldi with tonics, cannabis Indica, and electricity. The first dose of Indian hemp markedly stimulated the motor system. After the drug had been administered for four days, the patient (who had not voluntarily moved a finger for three months, nor spoken a word for five months) walked unaided from his room, ate his food, spoke a few intelligible words, then became very excited, dancing, laughing, and threatening those around him. Symptoms of paralysis of the bladder and rectum came on, and the treatment was discontinued. The treatment by electricity (two Stöhrer's elements) was given up after twenty-two sittings, its action being, on the whole, similar to that of the hemp. The most noteworthy difference was, that the latter acted chiefly upon the motor system, while the action of the electricity was most evident upon the sensorium. Neither method of treatment produced more than a temporary improvement, and Dr. Tebaldi concludes that the patient has psychic weakness, without disorganisation of the brain-cortex.

CHAS. S. W. COBBOLD, M.D.

THOMPSON ON SYPHILITIC PHTHISIS.—Dr. Reginald E. Thompson gives notes of twelve cases of the above disease in the *Lancet*, April 1878, p. 528. The clinical symptoms were characteristic and well marked, and were as follows:—Dyspnoea of a severe type, aggravated by exertion, especially on going up hill or up stairs; cough, generally accompanied by profuse expectoration; hæmoptysis was frequent, but small in extent; emaciation, often excessive, and complexion of skin olive-bronze, so characteristic of this disease.

[It may be interesting to the readers of the LONDON MEDICAL RECORD to review the subject of phthisis in its relation to syphilis, as found scattered through the pages of the medical journals during the last ten years. Mr. Furneaux Jordan, in the *Medical Times and Gazette*, 1867, vol. i, p. 697, published some interesting observations upon "hereditary syphilis in relation to so-called strumous diseases, and in relation to acquired syphilis". These were offered as propositions, and advanced in a spirit of inquiry. Mr. Jordan's observations led him to establish two general rules—1, Phthisis, caries, enlarged glands, eczema, and most probably most other so-called



strumous diseases, when they occur in adult life, are due to directly inherited syphilis; 2, the same diseases, when they occur in infancy, are due to the presence of hereditary syphilis in both parents, or to strongly marked hereditary syphilis in one, or to hereditary syphilis and acquired syphilis in one, or to hereditary syphilis in one and acquired syphilis in the other. Phthisis is syphilis. Phthisis from acquired syphilis is not rare. The commonest form of phthisis, however, is that of the adults, which is due to directly hereditary syphilis.

In a subsequent paper (*Medical Times and Gazette*, January 1868, p. 23), Mr. Jordan returns to the subject, in reply to a paper by Mr. Jonathan Hutchinson denying, *in toto*, the relationship of phthisis to syphilis. In this article, Mr. Jordan brings forward the views of Sir W. Jenner in support of his assertions, as well as many very striking facts, which were not stated in his original communication.

Nemo (*Medical Times and Gazette*, January 1868, p. 46) brings a good argument against Mr. Jordan's theory, and that is the fact, that monkeys, though decimated by phthisis, are exempt from syphilis. Dr. Drysdale, at p. 287 of the same journal, reports various cases bearing upon the question. Mr. Hutchinson, in his memorable address to the Pathological Society, introductory to the discussion upon syphilis generally, clearly defines his views regarding the relationship existing between phthisis and syphilis, and it will be found that they differ in no respect from those he propounded in reply to Mr. Jordan's original statements. (*Vide Lancet*, 1876, vol. i, page 204.)

Dr. Tibbits (*Lancet*, 1876, vol. ii, p. 890) gives a good paper "on the probable relationship of syphilis, scrofula, tubercle, cancer, and other allied morbid conditions", in which much valuable information may be found.

Dr. Lebert (*Medical Times and Gazette*, 1869, vol. ii, p. 621) asks what relation exists between tuberculosis and syphilis? His answer is, "To my mind this principle is certain, that syphilitic infection is not only able to develop an existing predisposition to tubercle, but that it can cause tuberculosis without any such disposition. Tuberculosis must, consequently, be classed as one of those diseases which may be caused by syphilis".

In the *Lancet* of 1877 will be found several valuable papers by Drs. Goodhardt, Pye-Smith, and others, upon this subject.

Dr. Marston (*Lancet*, March 1862, p. 276) states, he has seen cases of active phthisis apparently checked during the evolution of syphilitic disease, and hence it is probable that the hospital air and confinement have something to do with the appearance of tuberculous disease in strumous persons attacked with syphilis, rather than any direct influence which the syphilitic virus (*per se*) exerts in exciting tuberculosis. Dr. Bäumlér believes, with Mr. Hutchinson, that there is no connection whatever between tuberculosis and syphilis, an opinion, which his reviewer thinks (*British and Foreign Medico-Chirurgical Review*, July 1877, p. 58) is amply justified by the facts of the case, among the most striking of which, are the results of treatment. —*Rep.*]

WOAKES ON THE ETIOLOGY AND TREATMENT OF OCCIPITAL HEADACHE.—A very instructive paper by Dr. Woakes, is to be found in the *Practitioner* of April 1878, treating of the influence of the inferior cervical ganglion as a vaso-motor sub-centre, not only

in its relation to occipital headache, but also in the production of vertigo, tinnitus, and other symptoms that may have the disordered stomach as their exciting causes. A diagram shows the anatomical relations of the ganglion with the semi-circular canals, vertebral artery and plexus, brachial and cervical plexuses, the axillary artery and plexus, and the vagus. There is satisfactory evidence to show that the sympathetic ganglia enact the part of secondary vaso-motor centres, and also that they constitute correlating organs, by means of which, afferent impressions from distant regions are reflexly transferred in them to a totally different tract. The sympathetic ganglia may be regarded as so many stations situated on the lines traversed by vaso-motor impressions, in which the points are managed, and by means of which impulses are transferred from one line to another.

A singular physiological experiment was made on a large scale upon the influence of the cervical ganglion, in the American war. It was there observed that soldiers, shot through the brachial plexus in any part of its course, immediately fell to the ground. This did not occur in wounds of the other non-vital parts. The cervical ganglion has a communicating branch with the brachial plexus, vertebral artery, and semi-circular canals and labyrinth generally. The wounded vaso-motor nerve allows the vertebral vessels to dilate, the labyrinth receives a sudden accession of blood, with corresponding increased pressure of the endo-lymph, and so an attack of Menière's disease results, and the patient falls to the ground.

In the patient whose case formed the basis of Dr. Woakes's paper, a dose of cod-liver oil, irritating an already exhausted stomach, caused severe pain in the occipital region, vomiting, cold and blue hands, and running from nose and eyes. After two hours the vomiting ceased, the other symptoms continuing, with the addition of pain in the loins, thighs, and calves of leg. No vertigo was complained of, but a feeling of powerlessness in arms, though no paralysis was present. The symptoms closely resembled those produced by over smoking, though, in this case, the patient was no smoker. Camphor is an antidote to the effects of nicotin, and appears to have been beneficial in the case reported, together with bromide and tonic treatment.

IRVINE ON THE OCCURRENCE OF COLLAPSE, EMPHYSEMA, AND DESTRUCTIVE PNEUMONIA, IN ASSOCIATION WITH TUMOURS COMPRESSING THE BRONCHI.—Dr. Irvine, basing his observations on a case of mediastinal tumour, gives a series of papers in the *Lancet*, March 1, 1878, *et seq.*, upon the results of pressure upon the bronchi, and finds that where the main bronchus of the lung is impeded, and gradually obstructed by outside tumours, or by fibroid changes in its walls (such as those met with in syphilis and cancer), expiration is easily obstructed; and as a direct consequence of the bronchial obstruction the following morbid states may result:—(1) Emphysema on the side affected; (2) lobar collapse of the emphysematous lung; (3) lobular collapse and its sequelæ; (4) destructive pneumonia apart from collapse; (5) destructive pneumonia with collapse; (6) extensive pleuritic effusion.

RICHARD NEALE, M.D.

## RECENT PAPERS.

- On Latency of Cerebellar Disease and on Cerebellar Ataxy. By Dr. Nothnagel. (*Berliner Klinische Wochenschrift*, April 15.)
- On a Case of Fatty Heart. By Dr. E. Leyden. (*Ibid.*, April 22 and 29.)
- Experimental Researches on the "Knee-phenomenon". By Dr. S. Tschirreff. (*Ibid.*, April 29.)
- On Lead-Paralysis and Subacute Atrophic Spinal Paralysis in Adults. By Dr. M. Bernhardt. (*Ibid.*, May 6 and 13.)
- The Prognosis in Phthisis. By Dr. Heitler. (*Wiener Medizin. Wochenschrift*, April 27.)
- Clinical Observations upon Reflex Cough. By Dr. A. A. Smith. (*American Journal of Medical Sciences*, April.)
- Derangement of the Glycogenic Function of the Liver as a Cause of Bright's Disease. By Dr. G. M. Smith. (*Ibid.*)
- Paralysis of the Abductor Muscles of the Vocal Cords probably due to Sclerosis. By Dr. B. Robinson. (*Ibid.*)
- Acute Anterior Myelitis in the Adult. By Dr. J. Althaus. (*Ibid.*)
- The Connection between Stomachic and Labyrinthine Vertigo. By Dr. E. Woakes. (*Ibid.*)
- Is Phthisis Pulmonalis Contagious? By Dr. W. H. Webb. (*Ibid.*)
- Chronic Muscular Symptoms after Trichinosis. By Dr. E. C. Wendt. (*Ibid.*)
- On Acute Parenchymatous Hepatitis. By Dr. A. Testi. (*Lo Sperimentale*, April.)
- The Etiology of Abdominal Typhus. By Dr. V. Welle. (*Ärztliches Intelligenz-blatt*, April 16 and 23.)
- Two Cases of Acute Purpura Hæmorrhagica. By M. Alix. (*Lyon Medical*, April 7.)
- On Bronchial Dilatation in Tuberculous Subjects. By Dr. Grancher. (*Gazette Médicale de Paris*, April 6.)
- Athetosis. By Dr. A. C. Munro. (*Journal of Psychological Medicine*, April 1878.)

## SURGERY.

**ZUCKERKANDL ON EPICONDYLAR FRACTURES OF THE HUMERUS.**—In the *Allgemeine Wiener Medizinische Zeitung* for February, Dr. E. Zuckerkandl says that the epicondyles, internal and external, or, as we should call them, epitrochlea and epicondyle, or internal and external condyle, are, when fractured, much more frequently observed in the living subject than the dead, as patients incurring such injury usually recover. Preparations are very rare. No drawing of one is to be found in Malgaigne's atlas, who, referring to the matter in the text, writes as follows, "Some modern writers have also spoken of a fracture not extending into the joints and only affecting the small projection of the epicondyle; but, as yet, no one has cited an example of it". Gurlt can only discover one example of fracture of the internal condyle, which is in the Würzburg museum. Hamilton has seen no specimens of epicondylar fracture, and does not think it possible to diagnose the existence of a fracture of the external epicondyle, and even doubts its occurrence. Before describing two cases which came under the author's notice, one of the external and the other of the internal epicondyle, Dr. Zuckerkandl refers to the anatomical peculiarities of the lower end of the humerus, that it is formed by the synostosis of five centres of ossification, the diaphysis, namely, which includes the supratrochlear fossa, a portion of the eminentia capitata on the ulnar side, and behind, a part of the trochlea; second, the trochlea; third, the eminentia capitata; fourth and fifth, the epicondyles themselves.

The projection of bone above the trochlea, serving for origin to flexor muscles, is, in the adult humerus, called internal epicondyle, but its development shows it to be composed in part by the shaft, and in part by the separate centre for the epicondyle proper, so that true epicondylar fracture or separation can only occur in the young person. The projection readily felt on the outer side, and called external epicondyle in the adult, is in reality the termination

of the ridge of the shaft, on which posteriorly the centre and the external epicondyle unite.

The first case described by the author was a separation of the internal epicondyle in a fully developed man. On examination after dissection the injury proved to be a true epiphysary disjuncture, united by fibrous material to the shaft. The other case was one of fracture of the external epicondyle, and was also observed in an adult, but here there was a greater amount of separation, and less firm union of the fragment. The author gives figures which show that his cases were really epiphysary fractures or separations, and he adverts to Rumbaud and Regnault's views as to the tardy union of these apophyses with the shafts in some cases.

WILLIAM MAC CORMAC.

**LOSSEN ON RESECTION OF THE RIBS IN CASES OF RETROCOSTAL ABSCESS.**—Dr. Lossen, Professor of Surgery in Heidelberg, writes in the *Berliner Klinische Wochenschrift* for March 4 that resection of the ribs in retrocostal abscesses was first recommended by Roser in 1859. His object was the permanent dilatation of the empyematos fistulæ, which usually show a strong tendency to contract, principally through the close approximation of the adjacent ribs, whereby the introduction of tubes and cannulæ is rendered well nigh impossible. A case of empyematos fistula of eight years' standing was thus treated by Roser in 1865, after which it rapidly healed in 14 days. In 1869, Simon excised a portion of the sixth rib in a case of empyema with fistula (*Berl. Klin. Wochenschrift*, 1876, No. 19), with the object of permanently dilating the canal. After a few weeks the edges of the wound again came so close together, that only a fine sound could be introduced. At the same time, however, the suppurating cavity had become much smaller, and ultimately became completely obliterated, while there remained a marked sinking in of the sixth rib. This led Simon to the conclusion that the sinking in of the rib was the immediate cause of the closing of the cavity, which was before impossible, owing to the rigidity of the walls; for the ribs, with their cartilages and attached muscles, form a pretty rigid external wall to the pleural cavities, whose dimensions can only be altered by elevation or depression of the ribs, but not by any change in the curvature of the individual ribs, which is impossible. In longstanding empyema, the affected side of the thorax is in the condition of expiration. The ribs are depressed and still further approximated by adhesions, and even in immediate contact. The posterior wall of the cavity, being formed by the lung, is, on the contrary, more movable and less resistant, provided the lung itself is not tied down to the neighbouring thoracic wall by adhesive bands. If we now remove a portion of the costal arch, the walls of the cavity can approach and come into contact; and the abscess heals. Three cases thus treated within the last few years by Stehberger and Peitavy by section of the ribs, bear out this view, which is also confirmed by the following case. In October 1878, a young lady 19 years of age presented herself with a fistulous opening on the right side of the thorax. When she was two years old, an abscess had formed in this situation, from which, when opened, a large darning needle was removed. How the needle had come there could never be made out. In spite of all treatment a fistulous opening remained, with a constant discharge of pus. It was so narrow that only a fine probe could be introduced. Dr. Lossen, therefore, re-



moved a piece about two-thirds of an inch in length, of both the sixth and seventh ribs, whereupon a cavity of the size of a fist was reached, containing a considerable quantity of thick pus, and extending towards the axilla. Under a treatment consisting of carbolic injections, drainage, etc., the cavity diminished considerably, and the adjacent ribs sank inwards, while the patient, whose general health had latterly become much impaired, improved in every respect. In March, the ends of the ribs had approached so closely by cicatrisation that it became extremely difficult to keep the sinus open for the purpose of injection, while at the same time there clearly still existed behind it a pouch nearly  $2\frac{1}{2}$  inches (6 centimetres) in depth. Consequently Dr. Lossen further removed, on April 10th, a piece about  $1\frac{3}{8}$  inch long from the upper rib, and a piece about  $1\frac{1}{4}$  inch from the lower one, whereby almost the entire cavity was laid bare. The patient now did well; the ribs were drawn still further inwards, while a few small pieces of bone came away through the now shallow opening. The case is instructive, as showing the mode in which a radical cure was effected; and the necessity for a second resection proves the importance of removing a fairly large portion of the rib.

W. J. TREUTLER, M.D.

SMITH ON HÆMORRHOIDS AND PROLAPUS OF THE RECTUM OPERATED UPON BY THE CLAMP AND CAUTERY.—Mr. Henry Smith gives in the *Lancet*, April 1878, p. 561, a report of a fourth series of cases treated by this plan, making five hundred and thirty cases operated upon by himself, independently of the vast number of cases similarly treated by other practitioners. Mr. Smith has no death to record in the whole series, excepting one; none of the others gave a moment's anxiety. Many of the operations were undertaken in extremely unfavourable conditions of the general health, when the patients were exhausted with hæmorrhage and constant suffering. In only one case did troublesome hæmorrhage arise after the operation, and in no case had the rectum to be plugged. Neither pyæmia nor erysipelas appeared in any case. In only one case did abscess or fistula follow the operation in the first four hundred cases, but out of the last one hundred and thirty operations three instances of abscess and fistula occurred in patients whose health was greatly reduced, the cause being, apparently, the freer application of the cautery to avoid risk of subsequent hæmorrhage. In three cases contraction of the bowel occurred; each case yielded to the bougie, and this accident, Mr. Smith believes, can always be avoided by the use of a bougie for a month, where much external skin has been removed. Mr. Smith finds the operation as easily borne by patients of eighty years of age and upwards as by younger sufferers. He is glad to find the ligature yielding to the cautery, and believes soon that the former will be entirely abolished. The "pretty toy" clamp and old-fashioned hot iron are Mr. Smith's favourites. In only one case has a second operation been necessary, and in no single case did Mr. Smith fail to arrest hæmorrhage by the cautery.

MCDONALD ON TALIPES EQUINO-VARUS CURED THROUGH AN ACCIDENT.—Mr. John McDonald relates (*Lancet*, April 1878) a very instructive and suggestive case of the above distortion, cured without operation, in a lad aged eleven years. When between four and five years old, he trod upon a nail

and injured his left foot just where the pressure was greatest when he stood. Being active and restless, he moved about on the tips of the toes of the injured foot, and by the time the wound was healed, the foot was so much improved that he never afterwards walked on the outside of it, as formerly. In less than a year, the deformity had nearly disappeared. Being now six years old, he was induced to plant the sole of his right foot on the ground; and, gradually taking a pride in showing how well he could manage to walk, at the present time both feet are quite free from the deformity, except that the right tendo Achillis is perceptibly shorter than normal.

RICHARD NEALE, M.D.

ISHIGURO ON LIGATURES FROM WHALE-TENDONS.—Mr. T. N. Ishiguro, surgeon in the Japanese navy, has communicated to the *American Journal of Medical Sciences* for April, through Dr. S. D. Gross, a suggestion for the employment of the tendon of the whale for ligatures, in place of catgut. The ligature is made one metre (39 inches) long, and weighs three grains; and, although as fine as an ordinary silk ligature, it is capable of sustaining a force of  $4\frac{1}{4}$  lbs. (avoirdupois). It may be kept and applied like the ordinary silk ligature. After remaining in the wound a week or ten days, it is softened and nearly dissolved. The advantages which this ligature are said to possess are—1, cheapness; 2, capability of application without being prepared in carbolic acid.

A. HENRY, M.D.

CHAUVEL ON LYMPHADENOMA WITH RETINAL HÆMORRHAGES.—M. Chauvel (*Gazette Hebdomadaire*) reports a characteristic case of lymphadenoma. A custom-house officer, aged 41, entered hospital on account of a tumour on the left side of the face. He had always been healthy; there was no history of inherited or acquired syphilis or other disease. Four months previously, a small painless tumour had appeared spontaneously on the left upper eyelid. It grew very rapidly, and began to be painful. On entering the hospital, the patient had infiltration of the lymphatic glands of both sides of the neck, particularly the glands along the sterno-mastoid. On the apex of the tumour, somewhat above the left eyebrow, was a reddish sensitive spot. The mucous membrane of the left cheek presented some grayish ulcers. A few days later, diffuse swelling of the face, particularly in the left supra-orbital region, was observed, extending somewhat over the median line towards the right. The cheek was double its normal thickness; the swelling faded insensibly into the surrounding tissues. There were severe neuralgic pains in the left side of the head, earthy coloration of the skin, and great weakness. Under the mucous membrane of the cheek, hard nodules could be observed, with greenish-grey patches about the upper molar teeth; some days later the right cheek became swollen, but its mucous membrane remained unchanged. The mouth gave a fœtid odour. The patient was sleepless, but showed no disturbance of circulation, respiration, or digestion. Some days later the patient complained of a black spot before the right eye (the left eye was closed by the tumour), and on ophthalmoscopic examination several hæmorrhagic spots could be observed on the retina. The diagnosis of leukæmic retinitis was made. Excepting the glands of the neck, no other lymphatic glands were observed to be enlarged. The spleen was only slightly enlarged. The blood was not ex-

amined. The patient died at the end of four weeks. The *post mortem* examination showed no emaciation. The tumour was situated chiefly in the skin and subcutaneous cellular tissue. Section showed all the soft tissues, down to the healthy periosteum, changed to a mottled structure. The lymphatic glands presented the same appearance, which was shown by the microscope to be that of a characteristic lymphatic tumour. The spleen was somewhat enlarged; the liver was very large and pale, its intralobular capillaries showing a large proportion of white corpuscles; there was much albumen, with fibrinous casts, in the urine.

**BERTHOLLE ON DIRECT INJECTIONS INTO THE BLADDER THROUGH THE URETHRA.**—Injections of medicated fluids into the bladder has been much recommended; but a great drawback has been the often irritable state of the membranous portions of the urethra and the back of the bladder, and the difficulty has not been overcome by Reliquet's suggestion of a gum-elastic catheter in place of the metallic one.

Dr. Bertholle (*Gazette Hebdomadaire*, Nos. 19, 20, and 21, 1877) suggests a method of injecting fluids into the bladder without the use of the catheter. If a stream of water or other fluid be introduced into the urethra, it will, if entering under sufficient pressure, gradually dilate the sphincter vesicæ, and enter the bladder. If there be spastic contraction, this will be gradually overcome by the pressure of the column of fluid. Dr. Bertholle, who was the subject of chronic inflammation of the membranous urethra, practised the method for eighteen months on himself with a satisfactory result. It is as follows. The patient sits on a carpet on the floor with his back against the wall, the thighs abducted, the knees turned out, and the feet turned in. A vessel is placed conveniently to catch any water which may escape. An irrigator with a tube is placed upon a bench near by. To the end of this tube is fastened one end of a movable connecting piece provided with a stopcock, the other end being, when occasion requires, fastened to the cannula intended for insertion into the urethra. The cannula is of hard India-rubber, about five inches long, and rather less than a quarter of an inch in diameter. It is well oiled, and inserted into the urethra, and the patient, holding the urethra and cannula firmly with the left hand, can easily regulate the flow of the fluid by turning the stopcock. When the latter is opened, the water usually penetrates into the bladder without the patient being conscious of its entrance. So soon as he feels the desire to urinate, the stop-cock is to be turned off, as the bladder is then full. The patient can now empty the bladder at once, or can retain the fluid for a short time. The water to be injected should be lukewarm, or at least not of lower temperature than the body. The best time for employing the injection is just before going to bed. A single injection will dilute the stagnant urine and deprive it of its irritating quality.

The indications for the direct injection of water (or medicated fluids) are as follows. 1. Diseases of the bladder, and particularly chronic essential or consecutive cystitis. In the former, Bertholle considers this method capable of effecting a cure; in symptomatic cystitis it is only palliative, so long as the cause (stone, etc.) is not removed. 2. Contraction of the neck of the bladder. 3. Diseases of the prostate; the injection here acting indirectly by relieving the consecutive vesical catarrh. 4. Diseases

of the urethra, in particular, urethritis of the deeper portion, where contraction of the membranous portion, and of the sphincter vesicæ, with consecutive catarrh, is present. The contraindications are: 1. Paralysis or relaxation of the bladder; 2. Hypertrophy or other diseased condition of the prostate, causing difficulty in urination; 3. Organic stricture of the urethra.

**CAROTHERS ON THE ORIGIN OF CALCULUS.**—In a paper in the *Transactions of the Texas Medical Society*, quoted in the *American Journal of Medical Sciences* for April 1878, Dr. Carothers attributes the formation of vesical calculus to local rather than diathetic causes. A catarrhal inflammation of the lining membrane of the pelvis of a kidney, if of a somewhat low and chronic type, give rise to secretion of a viscid mucus. In the presence of this substance the uric acid, normally in solution, crystallises, forming with the mucus a semi-solid mass. Once begun, growth is easily understood. When driven from the kidney into the bladder, the nucleus acts like any other foreign body. The difference of the vesical mucus from that of the pelvis is believed to be the cause of the phosphates supplying, in whole or in part, the place of uric acid in its later growth. That the stone may originate in the bladder, by processes similar to those described as occurring in the kidney, is not very distinctly stated, though apparently implied. The arguments against diathetic and diatetic causes, here brought, are strong as to the beginning of calculi, but not equally so, perhaps, as to their subsequent growth.

**HODGEN ON EXTENSION IN TREATMENT OF FRACTURES OF THE FEMUR.**—In an article on fractures of the femur in the *St. Louis Medical and Surgical Journal* for April, Dr. John T. Hodgen lays down the following propositions.

1. In the treatment of fractures of the femur, continuous and equable extension is indispensable to the best results. This is conclusively shown in the impossibility of maintaining, with equal certainty, accurate coaptation by any other means.

2. Continuous and equable extension cannot be secured by lateral supports, the long splint of Liston, or its modifications, nor by plaster-of-Paris dressings, because the material used in making extension yields, and the points of the body on which extension and counter-extension are made undergo atrophy.

3. Continuous and equable extension can only be secured by suspending the limb, because in no other way can we avoid friction between the extending force and the part to be extended.

4. Suspension furnishes the best means for allowing motion of other parts of the body, while perfect apposition of the fragments of the fractured thigh is constantly maintained, because there is no resistance offered to the movements of the limb in any direction in which the body may be moved, except in the direction from the point of suspension. In every other direction, the limb follows the movement of the body without the least friction.

**SMITH ON FRACTURE OF THE PELVIS.**—A case of fracture of the pelvis was recently admitted into the Bellevue Hospital, at New York, under the care of Dr. Stephen Smith, which was of interest from the amount of comminution of the bones. The patient was a man aged 30, who received the injury by a heavy wall falling on him. He was admitted a few hours subsequently, suffering from shock. The fracture of the pel-



vis was recognized as being very extensive. There was a laceration of the urethra, caused by fracture of the os pubis. When the catheter was introduced it passed down to the site of laceration, and evacuated two ounces of bloody urine. By cautious manipulation a flexible catheter was carried into the bladder, and the usual amount of clear urine was obtained. External urethrotomy was performed, with the intention of relieving the bladder and preventing the occurrence of extravasation. In this respect the operation was successful, as only a slight amount of swelling occurred in the scrotum. The patient passed his urine in great part through the opening, but partly also in the natural way. He lived for a week, and at the end of that time died of general peritonitis.

*Necropsy.*—There was no change in the substance of the kidneys. The left kidney was imbedded in a clot of blood. The pelvis was dislocated at the sacro-iliac junction. There was also a fracture of a triangular piece of the ilium, forming a portion of the articulation with the sacrum. The ischium was fractured on the left side; this fracture extended through the acetabulum and involved the rami. The os pubis was also fractured, and caused complete rupture of the urethra. The crest of the ilium, three inches wide, was fractured; and behind this fracture the dislocation of the pelvis already referred to occurred. Notwithstanding the extensive fracture of the pelvis, involving the acetabulum, the head of the femur remained in position.

CUDDEBACK ON TREATMENT OF FRACTURE OF THE CLAVICLE BY PLASTER-OF-PARIS.—Dr. W. L. Cuddeback, house-surgeon to the Bellevue Hospital, New York, has devised a means of treating fracture of the clavicle by the plaster-of-Paris bandage. The principle consists in retaining the arm of the affected side in an immovable position. It leaves the clavicle open for inspection, and, if necessary, pressure can be applied to either of the fragments.

The elbow is bent in the proper position, and the arm placed in the usual manner across the thorax, so that the clavicle is carried backward and outward. A pad of cotton-wool is then placed in the axilla, and an additional amount of wool beneath the hand where it rests on the opposite shoulder. An ordinary plaster bandage is then carried two or three times across the thorax and arm of the affected side, and then made to pass obliquely along the course of the forearm of the affected side from the olecranon to the hand. It is then carried obliquely down the back, and directly across the body, as when first applied. The bandage is passed, alternately, directly across the body, and obliquely along the forearm, a sufficient number of times to make the shoulder perfectly immovable. To prevent pressure of the olecranon on the dressing, the elbow is padded with cotton-wool during the application of the plaster roller.

HOLMES ON EXCISION OF THE ANKLE-JOINT.—Mr. Holmes (*Medical Examiner*, March 1878) reports seven cases of excision of the ankle-joint, of which one was fatal and one called for subsequent amputation. Mr. Holmes discusses the operation at length, and concludes that it has certain advantages over amputation, but that, when temporising measures offer the prospect of ultimate cure, they should always be preferred. Healing is slow; there is a possibility of relapse, and a tendency to lateral displacement. There is always considerable shortening. In operating, he prefers lateral incision, but attaches

no importance to preservation of the periosteum. The whole astragalus should, he considers, always be removed.

MCCLELLAND ON BICARBONATE OF SODA AS A DRESSING FOR BURNS.—Dr. Ely McClelland reports the following cases in the *Louisville Medical News*. He says he has had considerable experience in the use of bicarbonate of soda, and selects these as of the most interest.

CASE I. A half-breed Nez Percés child received a terrible scald of the first magnitude, involving the greater portion of the scalp, the right side of the face, the neck, shoulder, and arm of the same side. The wounded surface was covered with lint which had been soaked in a saturated solution of carbonate of soda, and was kept wet by constant applications of the same solution. The relief from pain was instantaneous. No slough occurred, and the child has recovered, saved from any cicatricial deformity.

CASE II. Acting Assistant-Surgeon Pring, in medical charge of the troops at Mount Idaho, reports the following. The wife of an officer of the Second U. S. Infantry, who had accompanied her husband to the cantonments, from inability to obtain servants was herself engaged in preparing the early meal. Being inexperienced in such work, this lady poured water into a vessel containing boiling lard, and in the explosion which followed was severely scalded about the face and neck, involving the right eye. The bicarbonate of soda dressing was employed with the most decided benefit. The pain was instantly relieved, and no disfigurement resulted; vision, however, was totally lost in the injured eye.

To secure successful results from this treatment, it is necessary that the application be made of a saturated solution. A half pound of the bicarbonate should be added to a quart of water, and should be subjected to violent agitation. A sheet of patent lint or of old linen sufficiently large to envelop the wounded surface should be thoroughly saturated with the solution, and the surface should be completely covered therewith; the dressing should never be permitted to become dry, but the solution should be freely and constantly used. No other dressing is necessary, but the lint first applied should not be disturbed for several days.

#### RECENT PAPERS.

- The Plaster of Paris Bandage in Cases of Fracture and Resection of the Lower Jaw. By Dr. Dittel. (*Wiener Medizin. Wochenschrift*, April 27.)  
 On Retention of the Catheter in the Bladder after Lithotomy. By Dr. Dittel. (*Ibid.*, May 4.)  
 A Case of Gastrotomy. By Dr. O. Risel. (*Deutsche Klinische Wochenschrift*, May 4 and 11.)  
 Lupus of the Larynx. By Dr. G. M. Lefferts. (*American Journal of the Medical Sciences*, April.)  
 Case of Specific Stricture of the Rectum: Rectotomy: Recovery. By Dr. F. D. Beane. (*Ibid.*)  
 Suprapubic Lithotomy. By Dr. C. W. Dulles. (*Ibid.*)  
 Laryngeal Polypus Removed by Forceps and Cauterisation. By Dr. F. Baguzzi. (*Lo Sperimentale*, April.)  
 Eight Cases of Transfusion of Blood in Four Persons. By Dr. Bitôt. (*L'Union Médicale*, April 9.)  
 Contribution to the History of Pirogoff's Tibio-Calcaneal Amputation. By Dr. Gross. (*Revue Médicale de l'Est*, April 1.)  
 Cyst of the Inferior Maxillary Bone. By M. S. Duplay. (*Le Progrès Médical*, April 13.)  
 On the Migration of Needles in the Tissues of the Animal Economy. By Dr. Gillette. (*L'Union Médicale*, April 16.)  
 Vesico-Intestinal Fistula Consecutive on Imagination. By M. Bruchet. (*Revue Mensuelle de Médecine et de Chirurgie*, April 10.)  
 The Treatment of Wounds. By Mr. G. W. Callender. (*British Medical Journal*, May 11.)

## MATERIA MEDICA AND THERAPEUTICS.

WACHSMUTH ON TURPENTINE VAPOUR IN ACCIDENTS FROM CHLOROFORM VAPOUR.—Dr. Wachsmuth, of Berlin, has suggested the use of turpentine vapour as a preventive of those accidents which frequently occur in the administration of chloroform to produce anaesthesia. He says (*Vierteljahrsschrift für Gerichtliche Medicin*, April 1878) that it is well known to every physician that death often takes place suddenly from the vapour of chloroform, in spite of the greatest care and the use of every precaution before and during its administration. The operator, even when assisted by three or four of his colleagues, may see his patients die before him. There is, he states, a very easy and simple remedy for preventing the occurrence of such a serious accident. It consists in the addition of one part of rectified oil of turpentine to five parts of chloroform. The oil of turpentine in vapour appears to exert a stimulating or life-giving effect on the lungs, and protects these organs from passing into that paralysed state which seems to be produced by chloroform-narcosis. Dr. Wachsmuth, while lying on a sick bed, accidentally breathed the vapour of turpentine, and he experienced from this a strongly refreshing feeling. This fact induced him to try the plan of adding oil of turpentine to chloroform when the latter was used for anaesthetic purposes. The beneficial results surpassed his expectation.

A. S. TAYLOR, M.D.

GURJUN BALSAM IN GONORRHOEA.—This preparation, in place of copaiba, has been prescribed with success for gonorrhoea at some of the hospitals of Paris (*Bulletin Général de Thérapeutique*, Février 28, 1878).

The following is Vidal's formula, as used at the Hospital Saint-Louis :—

Gurjun balsam, 4 grammes (1 drachm); gum, 4 grammes (1 drachm); infusion of star anise, 40 grammes (10 drachms). To be divided into two doses, and taken immediately before meals.

Mauriac gives a larger dose: his formula at the Hospital du Midi is as follows :—

Gurjun balsam, 16 grammes (4 drachms); gum, 10 grammes (2½ drachms); syrup of gum, 30 grammes (7½ drachms); mint water, 50 grammes (12½ drachms). To be divided into three parts, and taken during the day.

M. Deval, who watched the effects of the remedy in Vidal's service (*Thèse de Paris*, 1877), recommends the former prescription, considering Mauriac's to be too powerful.

Gurjun balsam is cheaper than copaiba; it is also said to act more rapidly, and to have no disagreeable effect on the breath.

ARTHUR COOPER.

TREUTLER ON THE INHALATION OF NITROGEN.—Dr. Treutler, of Blasewitz near Dresden, reports in the *Berliner Klinische Wochenschrift*, March 25, that he has succeeded in finding a cheap and ready mode of obtaining nitrogen. He has long experimented with this object, impelled by the highly favourable results attending the inhalation of nitrogen in pulmonary disease, as employed in the Inselbad. He promises a future communication as to this process, which has been patented, and meanwhile publishes a selection of eight cases out of ninety in which the inhalation was employed with remarkable success.

They are examples of grave lung-disorder—phthisis, bronchitis, pneumonia—in various stages, incipient as well as far advanced. Thus case 4 is one of chronic, following acute, pneumonia, with great dyspnoea, emaciation, cough, night-sweats, and consolidation. Four days after the commencement of inhalation, the patient had gained strength so as to be able to walk three or four miles, and recovery was complete in little more than a month. Case 7 is one of phthisis in the last stage, with large cavern in the left apex, infiltration of the centre left lung, and some infiltration on the right side, night sweats, diarrhoea, etc. Temperature, 103.1° F.; weight, 95 lbs. (the patient was a woman 27 years old). Under nitrogen inhalation, diarrhoea ceased in four days, sweating in six days; the appetite and general health improved daily; but six weeks after admission she died suddenly of paralysis of the heart.

HEINLEIN ON URTICARIA FOLLOWING THE ADMINISTRATION OF SALICYLATE OF SODA.—In the *Aerztliches Intelligenz-Blatt* for April 9, Dr. Heinlein, of Erlangen, communicates the following case which occurred during the last winter.

C. K., a housepainter, aged 45, had a severe attack of articular rheumatism in 1853, from which he recovered slowly. Since then he had several further attacks, and while suffering from the last was admitted to the polyclinic, at Erlangen, on November 17, 1877. He presented the usual symptoms of rheumatic inflammation in the elbow and knee joints. The pulse was intermittent throughout the course of the case, raising the suspicion of a fatty heart, which was further indicated by the pasty appearance of the patient, and by his acknowledged addiction to alcoholic liquors.

During the first ten days, salicylate of soda was given in hourly doses of 7.7 grains (0.5 grammes) without any effect. Thereupon the dose was increased to 60 grains (4.0 grammes) with the following result. Soon after this first dose was given, there came on intense tingling and itching of the skin. The left side of the face, the lower extremities, and the right side of the chest were diffusely reddened, while both eyelids, the upper lip, and a great part of the legs were slightly cedematous. The pulse stood at 90°, temperature at 101.8° F., and the urine was slightly albuminous. At the same time all pain in the affected joints had vanished, and they could be freely moved about. By the next morning the redness had disappeared, and the pulse and temperature had fallen respectively to 80° and 100° F. In order to ascertain how far these symptoms were the result of the treatment, it was determined to repeat the dose at the next opportunity. The patient continued free from pain for the next three days, but on the fourth day the articular pains returned with such severity, that the patient himself begged for "the large powder". Sixty grains (4.0 grammes) of salicylate of soda were given: after fifteen minutes, severe burning pain in the frontal integument supervened, and five minutes later strong itching on the back of the right hand. In half-an-hour a marked eruption of urticaria was established over the greater part of the body, especially the legs and abdomen, with some cedematous swelling of the arms, eyelids, etc. This disturbance moderated in the course of two or three hours, and had completely subsided the next day. Subsequently, several smaller doses were administered without producing any of the above effects, and the patient recovered. After his recovery the patient consented once more to take the larger dose, and the



result was precisely the same as before. Hence it is evident that salicylate of soda must be classed with those drugs—cubeba, copaiba, santonin, turpentine, valerian—the administration of which is sometimes attended by urticaria. W. J. TREUTLER, M.B.

MCCASKIE AND WORKMAN ON KOUMISS IN THE TREATMENT OF OBSTINATE VOMITING.—Dr. N. McCaskie (*British Medical Journal*, March 16) and Dr. C. J. Workman (*ibid.*, April 13) report cases confirming the value of koumiss in the relief of obstinate vomiting. The subjects were females. Dr. McCaskie's case was one of gastric catarrh in a girl; one of Dr. Workman's cases was in advanced phthisis, and the other was the subject of fibrous uterine tumour.

[In 1870 an editorial article in the *Lancet*, vol. ii, p. 752, prominently brought the value of koumiss before the notice of the profession. Previously to this its name, nature, and composition were unknown to many English practitioners. Those who had wandered among the Tartar races, however, had seen the high estimation in which this beverage, prepared from mare's milk, was held, exempting those who drank it from the ravages of consumption, bronchitis, and other diseases. The best koumiss is made in Russian Tartary, but other institutions, supported by the Imperial Government, are now existing in Samara, Moscow, and Odessa. There are other institutions in St. Petersburg and elsewhere, where the koumiss is prepared from cow's milk, by workmen brought expressly from Tartary.]

A pamphlet by Dr. Jagielski did much to secure a trial of koumiss in England during the last few years. A good *resumé* of the value of koumiss, so far as it was then known in England, is to be found in the *Medical Times and Gazette*, vol. i, 1871, p. 71.

In the *Lancet*, vol. ii, 1874, p. 853, Dr. Myrtle, of Harrogate, reports several cases where he believed great benefit had been derived from the use of Chapman's Cow's Milk Koumiss. The cases were respectively severe attacks of marasmus, pyæmia, phthisis, and rheumatic fever. Mr. George, in the *British Medical Journal*, September 21, 1872, gives the formula for its preparation, which was communicated to him by a Russian gentleman. It is as follows:—Take of fresh milk any quantity; add a little water. Use, as a ferment, an eighth part of the sourest cow's milk obtainable; or a small portion of old koumiss will better answer the purpose. Cover with a thick cloth, and set in a moderately warm place. At the end of twenty-four hours the milk will be sour, and a thick substance will have gathered at the surface; beat this with a stick or wisp until it be thoroughly blended with the subjacent fluid. Let it stand for a time, and repeat the beating; and then, pouring it into a churn-like vessel, agitate the liquor till perfectly homogenous. Mr. George has used it for twenty years, and finds it of great value and very pleasant to his patients. Mr. Wigg reports an interesting case of heart disease and albuminuria in which koumiss was of great value, being exhibited for upwards of seven months (*Lancet*, vol. i, 1875, p. 72). Dr. Jagielski (*British Medical Journal*, February 3, 1872) gives his experience of the value of koumiss in phthisis, and there expresses his belief that, with the marvellous curative powers of koumiss ready to hand, no one need leave his comfortable English home in search of health. Dr. Landowski introduced this remedy into Parisian hospitals in 1874 (*Medical Times and Gazette*, vol. ii, p. 462), with great advantage to the consumptive patients.

Closely allied in therapeutical value with koumiss is the "Whey cure", the rationale of which is ably reviewed by Dr. Sieveking (*British and Foreign Medico-Chirurgical Review*, July 1853, p. 149), and by Dr. Lebert (*Medical Times and Gazette*, vol. ii, 1870, pp. 173, 201); Dr. Lersch (*Medical Times and Gazette*, February 1860, p. 171) explains the analogy that exists between the grape and whey cures and mineral waters. M. Carrière (*Ranking's Abstract*, January 1861, p. 273) gives an account of the value of the "Whey cure" as then practised in Germany.

Goat's-whey finds an able exponent in Dr. Charles Lee in the *American Medical Times* (February 1873), *vide Ranking's Abstract*, January 1863, p. 316, as well as in Dr. Lebert in the paper previously referred to.—*Rep.*]

CLARK ON OXALATE OF CERIUM IN CHRONIC COUGH.—Mr. Thomas Clark (*Practitioner*, April 1878) has used this drug with apparently great advantage in cases of obstinate cough with shortness of breathing. In the case reported the cough had existed for some years, and vanished after a few five-grain morning doses. In other cases the cough was stated to have ceased in twenty-four hours, the cerium acting as a direct sedative.

[Oxalate of cerium was first introduced by the late Sir James Simpson about 1855, and proved in his hands a valuable sedative tonic. Since this date many practitioners at home and abroad have found the oxalate of cerium a trustworthy friend. (*Vide Medical Times and Gazette*, December 1870, p. 646.) Its value in epilepsy has been asserted. (*Medical Times and Gazette*, vol. i, 1862, p. 10, and vol. ii, p. 108.) It is, however, in vomiting, and more especially in that form accompanying pregnancy, that its great fame has chiefly spread, for doubtless it often checks the complaint when all other means have failed, nor is its power unknown in vomiting occurring in the course of many diseases. (*Vide Medical Digest*, section 860-4.) In atonic dyspepsia, Dr. Charles Lee has found the drug most useful.—*Rep.*]

WINTERNITZ ON THE ACTION OF THERMAL APPLICATIONS TO THE SKIN UPON THE CIRCULATION IN THE BRAIN AND OTHER ORGANS.—In the *Practitioner*, April 1878, the views of Dr. Winternitz upon the rationale of the action of hot applications to the skin are expounded, and the experiments upon which these views are based are described. It was found by Golz that by repeatedly percussing the abdomen of a healthy frog the heart can be made to pulsate more slowly, and may even be made to stop altogether. When the tapping ceases, the heart generally remains for some little time in a state of stand-still, and when it again begins to pulsate its condition is the same as if the animal had lost an enormous quantity of blood. The venæ cavæ remain almost empty, the circulation in the web ceases, and arteries which are cut through hardly bleed at all. Where, then, is all the blood, since no vessel has been injured, and no blood whatever has been lost? Golz found, on *post mortem* examination, that the vessels of the mesentery, and especially the veins, were enormously distended, although none showed a solution of continuity, showing that the vaso-motor nerves were paralysed, and these vessels consequently dilated. Tension thus being decreased in the partially emptied vessels, the heart becomes more and more affected.

A similar result follows the division of the splanchnic nerves, as shown by Asp, von Basch, and others, when all other parts of the body are drained excepting the

district of dilatation, so that, in the eye, the contraction of the retinal vessels is clearly seen after division of the splanchnics. Thus we see that in the abdominal vessels, controlled and regulated as they are by the splanchnic nerves, we have an apparatus for regulating the blood-pressure in the body generally, and that increased tension, in any vascular district of the body, may be compensated by dilatation of the abdominal vessels. The whole so-called derivative method depends upon the principles just sketched.

The utility of local and general thermal applications to the surface of the body has long been recognised, but the *rationale* of their action has only recently been scientifically established by the experiments of Schüller. He carefully trephined a rabbit on both sides of the sagittal suture, and observed the vessels of the pia mater. Mechanical pressure over the abdomen caused venous congestion of the pia mater. Pieces of ice laid upon the dura mater caused powerful contraction of all the vessels. Where the superior cervical ganglion of the sympathetic had been removed, the application of ice produced no effect on that side. A cold wet compress on the belly or back of the animal produced, almost without exception, immediate and persistent dilatation of the arteries and veins of the pia mater.

A warm wet compress applied to the belly or back had a contrary effect. The vessels contracted less vigorously, the respiration became quicker and shallower. Plunge-baths, hot and cold, have an analogous but more powerful effect than compresses.

A young man lay two hours, naked, on a bed covered with a blanket; then a thermometer was placed in the auditory meatus, another in the axilla, and a third in the rectum. After the thermometer had indicated a constant temperature for some time, compresses were placed on the legs, reaching from the foot to the knee. After fifteen minutes the ear thermometer began gradually to sink and reached its lowest point after fifty-five minutes, falling as much as  $0.4^{\circ}$  C. ( $0.72^{\circ}$  Fahr.). In the axilla the minimum loss of heat was only  $0.2^{\circ}$  C., while in the rectum the temperature rose  $2.0^{\circ}$  C.

A further communication is promised upon this interesting subject. RICHARD NEALE, M.D.

ASHHURST ON A TASTELESS ANTIPERIODIC.—In order to overcome the difficulty of administering cinchonia on account of the bitter taste which is developed when, after the administration of the pure alkaloid, portions remaining in the mouth are dissolved by the salivary fluid, Dr. S. Ashhurst (*American Journal of Medical Sciences*, April) mixes the cinchonia with sugar of milk, and with some bicarbonate of soda, to neutralise free acid in the saliva. "A powder containing one grain of cinchonia, four grains of sugar of milk, and one-tenth of a grain of bicarbonate of sodium, possesses only the slightly sweet taste of the sugar of milk, and is quite readily miscible with water or milk; or, if preferred, can be easily swallowed dry."

SENFTLEBEN ON SULPHURIC ACID AS AN ANTIDOTE TO CARBOLIC ACID.—Dr. Senftleben (*Deutsche Militärärztl. Zeitschrift*, Heft 1, 1878) recommends sulphuric acid as a remedy for the toxic symptoms sometimes produced by carbolic acid. The poisoning is produced by the presence of phenol in the blood; and he says that the sulphuric acid, combining with this, produces sulphocarbolic acid, which is innocuous. He has treated several cases

successfully on this principle. The mixture which he uses is: Dilute sulphuric acid, 1 part; gum water, 200 parts; syrup, 30 parts; one tablespoonful to be taken every hour.

MARTELLI ON THE TREATMENT OF ASTHMA BY SUBCUTANEOUS INJECTION OF ARSENIC.—Dr. Martelli reports in the *Gazzetta Medica Italiana (Allgemeine Med. Central. Zeitung*, No. 2, 1878), the case of a man aged 30, who had suffered from repeated attacks of asthma, which were not relieved by various methods of treatment, including subcutaneous injection of strong solutions of morphia. Dr. Martelli used subcutaneous injections of Fowler's solution of arsenic (one part to two of water). Two or three syringefuls were injected through the same puncture. The effect was remarkable: the paroxysms at once ceased. After two drachms of the arsenical solution had been used, the disorder quite disappeared, and the patient's health improved greatly. Later, there was a return of the asthma, which was subdued by two injections of the solution. The injections were not attended by any troublesome results, local or general, beyond pain in the arm of very short duration.

A. HENRY, M.D.

SEGUIN AND OTHERS ON BROMIDE OF POTASSIUM AND CHLORAL IN EPILEPSY.—At a recent meeting of the New York Pathological Society (*New Remedies*) a committee on neurotics (of which Dr. E. Seguin was chairman) made a preliminary report on the use of a mixture of bromide of potassium and chloral in epilepsy, the following formula having been used in most cases. Bromide of potassium, 1 ounce; chloral hydrate, half an ounce; water, seven ounces; a teaspoonful to be taken three times a day.

The committee based their conclusions upon reports from the following-named gentlemen. Dr. A. McL. Hamilton (13 cases), Dr. McBride (4 cases), J. H. Emerson (2 cases), Dr. Shaw, of Brooklyn (6 or 8 cases), Dr. E. Seguin (2 cases). The reporters were united in the opinion that this combination enabled them to dispense with about two-thirds of the quantity of potassium bromide that had been required to produce an arrest of the paroxysm; that the intervals were longer, the attacks diminished in severity, and the accidents of bromism to a great extent avoided. The patients became more cheerful and lively, and presented in every way a better condition than when under treatment by the bromide alone. A discussion followed, in which Dr. E. R. Squibb gave his experience in the treatment of four cases of epilepsy. He had yet to hear of any case in which an explosion of *grand mal* had occurred while the patient was in a condition of bromism. In his cases, the accidents of bromism had been avoided by giving the medicine in rapidly increasing doses until decided bromism had been produced, when it was suspended altogether for a few days, to be given again in the same manner, and again suspended on the accession of bromism. Dr. Seguin could not think that it would ever be proper to omit the use of the bromide for a single dose; and Dr. Thomson said he insisted upon his patients making up their minds to continue the use of bromide uninterruptedly for at least eighteen months, or it would be useless to attempt the treatment at all. Drs. Hanks and Castle had employed a mixture of potassium bromide and chloral in other affections of the nervous system besides epilepsy, with the experience that the combination was more effective than a corresponding quantity of either remedy would have been.



**SAINT-PHILIPPE ON URETHRITIS FOLLOWING THE USE OF ARSENIC.**—M. Saint-Philippe publishes in the *Gazette Médicale de Bordeaux* two cases in which the internal administration of arsenic was followed by urethritis. The first was a man aged 40, suffering from malarial fever, for which arsenic was prescribed. He had, however, taken but a small dose (.16 grain) of the remedy when he exhibited all the signs of poisoning. The following day he was attacked by urethritis. He positively affirmed that he had not been exposed for more than two months previously. The other patient was put upon arsenic for some skin-trouble, but owing to a mistake he took double the dose ordered, so that at the end of eight days he had taken sixteen milligrammes (.64 grain). Symptoms of poisoning now showed themselves, and at the same time the commencement of a well-marked urethritis, which yielded to the usual treatment in fifteen days. Here, again, exposure was denied for a long time previously, and, taking this case in conjunction with the foregoing, M. Saint-Philippe was forced to admit an arsenical urethritis; nor does he deem it illogical to suppose that arsenic, while being eliminated with the urine, may produce effects similar to those produced in the digestive tract and on the skin, where it is also eliminated. As, however, this is a toxic rather than a physiological irritation, the poisonous, instead of the simple therapeutic action of the drug, is necessary for its production. Hence it is rarely met with in practice. This form of urethritis resembles that caused by certain substances known to have a very marked irritant action on the genito-urinary mucous membrane, such as cantharides, certain balsams, and even beer and alcohol in excess.

**PEPPER ON THE TREATMENT OF TYPHOID FEVER BY NITRATE OF SILVER.**—Dr. Wm. Pepper, in an article in the *Boston Medical and Surgical Journal*, October 25, 1877, says that, beginning with the second week of the disease, when the abdominal symptoms of pain and diarrhoea have fully set in, one-quarter of a grain of nitrate of silver with one-twelfth of a grain of belladonna, and from one-sixth to one-half of a grain of the watery extract of opium, are administered in pill form three times a day after meals. He thus reduces the diarrhoea and tenderness. He uses very little stimulus, and allows only beef-tea and milk as articles of food. Quinine is given with other tonics. Fever is reduced by frequent sponging of the skin of the entire body. When the high fever resists sponging, he employs cool baths. The best time for the use of the cold bath is in the early stage, during the first week or ten days, in cases where the temperature rises above 103°, and is not controlled by frequent spongings, large doses of quinine, diaphoretics, etc. The high fever of the subsequent stages is to a certain extent of a sympathetic nature, largely dependent on the amount of intestinal lesion; hence cold baths are then less available and attended with more risk. Nitrate of silver is used both with the hope of limiting the amount of specific follicular catarrh of the intestines, and with the intention of favourably modifying the secondary sympathetic symptoms. Dr. Pepper has cured thirty-nine out of the forty cases of typhoid fever, in which the treatment by nitrate of silver has been employed.

**MASCAREL ON TREATMENT OF RHEUMATIC FACIAL PARALYSIS BY GALVANISM.**—Dr. J. Mascarel (*Bordeaux Médical*, September 18, 1877) alleges that he obtains much success from the following method of treating rheumatic paralysis of the facial nerve.

On the first day he introduces a platinum needle, a centimetre or a centimetre and a half ( $\frac{1}{10}$ ths or  $\frac{9}{10}$ ths of an inch) in the direction of the stylo-mastoid foramen, towards the exit of the facial nerve from the cranium. A second platinum needle is placed horizontally in front of the orbit on the paralysed side, in the superior fibres of the orbicularis palpebrarum; the needles are then connected with the poles of a battery of the desired intensity, and an interrupted current passed during twelve, eighteen, or twenty minutes. Violent contractions are caused by this plan, almost convulsive in the orbicularis palpebrarum, and sometimes the eyelids are closed at the first sitting. The second day, this operation is repeated with the palpebral needle below the eye. On the third, fourth, fifth, and sixth days the facial needle is successively introduced into those muscles of the face which prove most refractory; the other needle is always kept near the stylo-mastoid foramen. After the seventh or eighth day of this treatment the paralysis had disappeared in a dozen successive cases.

**WORKMAN ON ACETATE OF LEAD IN DRACHM-DOSES IN POST PARTUM AND OTHER HÆMORRHAGES.**—According to Dr. Workman (*Canada Lancet*, January 1, 1878), acetate of lead, in drachm-doses, acts as an uterine motor stimulant, to cause firm contraction after delivery of the uterus, thereby preventing *post partum* hæmorrhage. In hæmoptysis, also, acetate of lead may be given in half-drachm to drachm doses, with very prompt effect. It should be given in solution, and the dose repeated, if necessary. No opium should be given with it. In these large doses the acetate of lead usually purges, and thus becomes eliminated from the system. Notwithstanding the prevailing opinion to the contrary, these large doses of acetate of lead are alleged by this author to be perfectly harmless. In corroboration of these statements a number of cases are cited.

**REITER ON DIPHTHERIA TREATED BY LARGE DOSES OF CALOMEL.**—Dr. M. C. Reiter, in the *Philadelphia Medical Times*, January 5th, 1878, says that he has become convinced that diphtheria is due not to a poison of the blood, but to an excess of fibrin corresponding to the "inflammatory diathesis" of old times. His treatment is calomel in large doses every hour, until the stools "resemble the fresh water polyps in water-troughs, gelatinous, and of a bright green hue; then the patient is safe." The proof of correct diagnosis is, "should prostration follow such heavy doses," the case is not diphtheria, but tonsillitis. He says ptialism does not follow such administration of calomel. The calomel is given in cold water, and patients are permitted to take cold water and lemonade as much as they wish. Dr. Reiter also insists that the patients take mucilaginous fluids, such as gum-water, barley gruel, flaxseed tea, and slippery elm-water—no other diet. He has given some of his young patients as much as half an ounce of calomel in four days' time. He alleges that by this treatment he has had a high percentage of cures.

**BELL ON THE EUCALYPTUS GLOBULUS.**—In the February number of the *Edinburgh Medical Journal*, there is a note on some of the therapeutic virtues of eucalyptus globulus, by Mr. Benjamin Bell. The preparation used by Mr. Bell was the tincture, and he seldom prescribed more than a teaspoonful, mixed with a wine-glassful of water twice a day. Mr. Bell says: "In several cases of bronchitis with profuse expectoration, I have witnessed remarkable benefit after

a very brief use of the remedy, evinced by a rapid diminution of the discharge, and also by a corresponding improvement in the general condition of the patient." Mr. Bell recommends it in certain forms of disease of the stomach and bowels. He relates several cases of ulceration or some other organic disease of the stomach, in which the internal use of this drug proved of great benefit. He also found it of manifest use in a case of diphtheria, and recommends its use in certain cases of typhoid fever.

**DOW ON QUININE AS A PARTURIENT.**—Dr. W. Dow, in the *American Medical Bi-Weekly*, January 5, 1878, concludes that sulphate of quinine cannot, by its action on the system, originate expulsive contractions of the uterus, and that it (quinine) can be given in all stages of utero-gestation without producing abortion or miscarriage. But it is useful to stimulate the contractions of the uterus when once they have been aroused and have become inefficient; in most cases it is preferable to ergot, on account of a greater degree of certainty and uniformity of action, on account of greater safety to mother and child, and its prophylactic action against puerperal fever.

**LUBALSKY ON THE ETHER-SPRAY IN THE OBSTINATE VOMITING OF PREGNANCY.**—Dr. Lubalsky (*Bulletin de l'Académie Royale Belge*, No. 2, 1878) recommends the use of the ether-spray from the first appearance of the vomiting of pregnancy, or even of nausea. He applies it to the epigastrium and the corresponding part of the spine for from three to five minutes, and repeats it every three hours. In obstinate cases he alternates the ether-spray with that of chloroform. He has found success almost constant, and relief immediate. He adds that this proceeding has been efficacious in cases of whooping-cough and asthma.

**ZINKE ON THE LOCAL EFFECT OF QUININE IN DIPHTHERIA.**—Dr. E. J. Zinke of Cincinnati, in the *Clinic*, extols the use of quinine as a topical application in diphtheria. His experience is confined to three cases, which all recovered, while four cases treated otherwise immediately before, terminated fatally. The manner of using it was in solution, and applied by means of an atomiser; the strength was a drachm of the salt to an ounce of water, with enough hydrochloric acid to make a clear solution. He says that quinine acts by killing the micrococci, masses of which, betraying no signs of life, were discovered by Dr. Zinke in membranes thrown off in the cases reported.

**HOBE ON THE PREPARATION OF PEPTONE.**—At a meeting of the Pharmaceutical Society of Berlin, in December last, Mr. Hobe read an interesting paper on the preparation of peptone (*Pharmaceutische Zeitung*, No. 102). The best process for preparing the so-called peptone, or pancreatic meat-solution, is due to Dr. Adamkiewicz. Fresh blood is converted into a colourless mass by beating and protracted kneading, followed by washing with frequently renewed soft water, holding in solution a small quantity of ammonia. The pressed white fibrin thus obtained is comminuted into fine shreds in capacious dishes, and covered with a large quantity of water containing 0.2 per cent. of hydrochloric acid. The fibrin thereby soon swells up, and gradually becomes converted into a pellucid jelly, which is now ready for the addition of the ferment, namely, pepsin. The latter is obtained from the gastric membrane of the hog, and for the present purpose is preferably extracted by means of glycerine. Alcohol is first added to the

finely cut membranes, in order to coagulate the albumen, after which they are dried by exposure to air, and then covered with glycerine, which abstracts the pepsin in the course of a few weeks. The clear yellowish-red glycerole of pepsin is poured over the fibrin-jelly, and the whole heated for some time in a water bath at a temperature of 50 or 60° C. (122-140° F.) The compact mass soon begins to liquefy, and is converted finally into a thin fluid of a gray opalescent colour. In from two to five hours large masses of fibrin may in this manner, as it were, be digested. The crude liquid is now separated by straining from any undigested shreds, and carefully neutralised with sodium carbonate, which causes the separation of a flocculent gray precipitate, the so-called parapeptone. This is removed by filtration. The filtrate, which has a clear straw-yellow colour, is faintly acidulated, once more filtered and evaporated to the consistency of honey at a temperature not exceeding 70° C. (158° F.)

Peptone is distinguished from ordinary albumen by its proneness to solidify in the cold, and to return to a liquid state when heated, being thus just the reverse of albumen. For internal administration, it has been found best to mix it with extract of beef, in the proportion of five parts of the latter to 100 parts of peptone. Sixteen grammes, or one tablespoonful of this peptone, are equivalent, in nutritive power, to 20 grammes of lean meat. A dry peptone may be prepared by precipitating the original liquid with alcohol, treating the precipitate repeatedly and for some time with alcohol and ether, then dissolving in a little water, and drying at 30° C. (86° F.) In this state it forms a glassy brittle mass, easily pulverisable, and readily soluble in water. Long keeping is said to impair its solubility. It has a neutral reaction, and reduces alkaline copper solution.

**PIFFARD ON ASIATIC PILLS.**—The well-known "Asiatic pills" of the French *Pharmacopæia*, composed of arsenic and black pepper, enjoy a high reputation in cutaneous affections, but are uncertain, as met with in pharmacy. Dr. Piffard (*Archives of Clinical Surgery*) recommends the following:—*R.* Acidi arseniosi, partes 2; pulveris piperis nigri, partes 20; sacchari lactis, partes 78. *M.* Tere bene secundum artem. To obtain a good preparation, it is essential that the mixed powders should be very thoroughly triturated, as directed in the French *Pharmacopæia*; and it is specially requisite that the arsenic should be equally diffused throughout the mass. To accomplish this successfully, one-third of the sugar should be mixed with the arsenic, rubbed and mixed for at least twenty minutes; another third of the sugar should then be added and manipulated for twenty minutes more; afterwards the rest of the sugar and the pepper should be added, and rubbed with the rest for an additional twenty minutes. The powder thus made, according to the formulæ given, can afterwards be made into pills, compressed or not, of any desired size, or it may be dispensed in the form of powder. In the latter case it cannot be comfortably taken, either dry on the tongue or in water, on account of the hotness of the pepper. To remedy this, however, Dr. Piffard has sometimes directed patients to keep their powders in the dining-room, and at each meal to put the dose upon their plate, and to use the "medicated pepper" in the same manner as they would the ordinary non-medicated condiment.

**OLEATE OF MERCURY.**—The following formula for oleate of mercury, first introduced by Mr. J. Marshall,



F.R.S., is from the *University College Pharmacopœia*. To each drachm of it add one grain of morphia (pure alkaloid) for oleate of mercury and morphia (10 per cent.) :—

Precipitated peroxide of mercury, 1 drachm ; oleic acid, 10 drachms.

To the oleic acid, kept agitated in a mortar, sprinkle in the peroxide gradually, and triturate the mixture frequently during twenty-four hours until the peroxide is dissolved and a viscid solution is formed.

### RECENT PAPERS.

The Kreuznach Treatment in its Physical and Physiologico-Chemical Signification. By Dr. Wimmer. (*Berliner Klinische Wochenschrift*, April 22.)

Therapeutic Indications for the Use of Mud-Baths containing Sulphate of Iron. By Dr. Jacob. (*Ibid.*, May 6.)

The Practical Value of Thymol. By Dr. L. Lewin. (*Deutsche Medicinische Wochenschrift*, April 13.)

Metallotherapy and its Application to the Diseases of Children. By Dr. R. Guaita. (*Lo Sperimentale*, April.)

Experimental and Comparative Study on Arsenic and Cod-Liver Oil in the Treatment of Pulmonary Phthisis. By M. Joanny Rindu. (*Lyon Medical*, April 14.)

The Application of Inhalations at Mont Doré to the Treatment of Pulmonary Phthisis, and the Prophylactic Cure of Tuberculosis by the Water of that Thermal Station. (*L'Union Médicale*, April 13.)

On Subcutaneous Injections of Neutral Bromhydrate of Quinine in some forms of Telluric Fever. By Dr. Dardenne. (*Journal de Thérapeutique*, April 10.)

The Mydriatic Properties of Duboisia Myoporoides. By G. N. Alexandroff. (*Ibid.*)

Fresh Facts concerning Chologogues. By M. Labbé. (*Ibid.*)

### OBSTETRICS AND GYNÆCOLOGY.

MÜLLER ON CÆSAREAN SECTION WITH EXTIRPATION OF THE UTERUS.—In the *Centralblatt für Gynäkologie*, March 2nd, 1878, Dr. Müller, of Bern, relates the following case. E. R., aged 37, was delivered naturally of her first child at the age of 22. Since then she had given birth normally to four children. Symptoms of osteomalacia appeared, however, in her third pregnancy. Pregnant for the sixth time, she was found to present the beak-shaped pubis, heart-shaped pelvic outlet, diminished stature, and lordosis, characteristic of osteomalacia. Under chloroform, it was found that the pelvic bones could not be opened up. The belly was remarkably pendulous. The foetal heart could be heard. On February 1 the waters broke, but labour-pains did not set in. On February 2 there were feeble labour-pains. On February 3, during several hours, there were strong pains. On February 4 she had strong pains; the uterus was painful; the foetal heart was no longer to be heard. In consequence of the rise in temperature, quickened pulse, tympanites, and other signs, Dr. Müller arrived at the conclusion that there was inflammation of the womb with death of the fœtus. At eight p.m., under complete chloroform-narcosis and carbolic spray an incision was made through the abdominal wall between the umbilicus and symphysis. The uterus, exposed, was twisted on its long axis, so that the left horn emerged from the abdominal wound and the body of the uterus followed. A ligature was then applied round the cervix, and the uterus opened outside the abdomen. The fœtus was delivered, and the placenta was removed without any bleeding from the placental site. The fœtus was dead, and the uterus contained some offensive gas and purulent foetid liquid. The uterus was then amputated above the ligature. There was no bleeding, and no fluid escaped into the abdomen. The

pedicle was sewn to the sides of the abdominal wound, which was closed as in ovariectomy. A drainage-tube was left in between the pedicle and the last abdominal suture. On the second day, the pedicle disappeared into the abdomen. The ligature came away on the tenth day. The temperature and pulse fell immediately after the operation. On the day following the pulse was 84. At the time of reporting the case, seventeen days after the operation, Dr. Müller considered the patient out of all danger, and convalescent. He remarks that, had he not extirpated the uterus, the patient would have succumbed to pyæmia, symptoms of which were present at the operation. The rapid fall of temperature after the operation testified to the correctness of the treatment. He also lays stress on the good result of ligaturing the cervix, and thereby securing a bloodless operation.

WALTON ON CÆSAREAN SECTION.—In the *Cincinnati Clinic*, February 1878, Dr. S. E. Walton relates the following case of Cæsarean section. Mary F., emaciated, bronchitic and suffering from hip-joint disease, became pregnant, and consulted Dr. Walton. On examination, Dr. Walton discovered that she was pregnant nine months of a living child. The entire right pelvic wall, however, had assumed a straight line owing to bony deposit. The antero-posterior diameter at the brim was  $2\frac{1}{2}$  inches, the transverse diameter about three and a half. The opinions elicited from Dr. Walton's colleagues in consultation were divergent. One advised craniotomy, the second Cæsarean section, and the third thought the child could be delivered by the forceps. On February 14 the second stage of labour set in at three p.m. The forceps was applied several times, but slipped. Cæsarean section was determined upon. Anæsthesia being produced, an incision was made from below the umbilicus to within two inches of the symphysis. The opening into the uterus was not quite so long. The child was easily delivered, feet first. The placenta separated without hæmorrhage. There were gaping of the uterine wall and hæmorrhage, so Dr. Walton introduced a silver suture. The patient was at this moment pulseless and gasping. The external wound was closed, the patient placed in bed, and stimulants administered. The operation was performed under the carbolic spray, and the antiseptic method used throughout. Fifteen days after the operation she died. No necropsy could be obtained. Dr. Walton draws the following conclusions from the above case.

1. In the case reported Cæsarean section was justifiable, as the result proved.

2. Cæsarean section should be resorted to in all cases where the antero-posterior diameter of the superior strait is two and a half inches or under, and gestation has advanced to the ninth month.

3. Every effort should be made to perfect the operation of Cæsarean section, and its use in the cases mentioned should be encouraged.

4. Craniotomy should be discouraged, and its use restricted to the narrowest possible limits.

YOUNG ON A CASE OF ABORTION IN WHICH THE PLACENTA WAS RETAINED.—In the *Obstetrical Journal of Great Britain and Ireland*, April 1878, is recorded the following case. Dr. Young was called to Mrs. S., four months' pregnant, who had over-exerted herself by walking and was seized on her return home with sudden faintness. She was put in bed and violent flooding set in. When Dr.

Young arrived he found that the maid-servant had thrown the fœtus, which had been expelled during the flooding, down the water-closet. On examination, he felt the placenta partially protruding through the os, which was of the size of a florin. He plugged the vagina, gave a full dose of ergot, and left her. Next day he removed the plugs, found the os smaller, and the placenta more out of reach. Dr. Young wished to give chloroform, and remove the placenta, but the patient would not submit. A medical friend was called in, who agreed in the diagnosis. Meanwhile the os closed, and no traces of placenta came away; the napkins were all carefully examined. The patient recovered, and went on a voyage. Dr. Young does not think it was retained in the form of a placental polypus, but became absorbed.

**WILLIAMS ON THE PATHOLOGY AND TREATMENT OF MEMBRANOUS DYSMENORRHOEA.**—Dr. John Williams relates (*Obstetrical Transactions*, 1877) fourteen cases of membranous dysmenorrhœa, some of which occurred in single, others in married women. He is of opinion that the inflammation of the internal surface of the uterus, often found in these cases, is the result, not the cause, of the membranes, but is the result of the membranous dysmenorrhœa. He does not believe they are the results of abortion, as they frequently occur in virgins. The source of mischief must be looked for in the walls of the uterus itself. The membrane is the decidua ordinarily shed as *débris* at menstruation. Of the fourteen cases recorded, eleven had in all probability suffered from membranous menstruation from the first. Dr. Williams thinks there is something wrong in the uterus from puberty; in fact, imperfect evolution. As regards treatment, everything should be done to favour the physical development of the young girl. Once the condition is established, the only means whereby a cure is likely to be effected is electricity, either in the form of the continuous current or by a galvanic stem. FANCOURT BARNES, M.D.

**WILTSHIRE ON PRURITUS VULVÆ AND DIABETES.**—Dr. Wiltshire (*Lancet*, April 1878, p. 529) draws attention to the well-known relationship or frequent association of pruritus vulvæ with diabetes, and desires to emphasise the fact that pruritus vulvæ is often the only symptom of diabetes. Borax lotion acted as a specific in the case reported.

[Professor Winckel (*Practitioner*, September 1876, p. 200) makes some interesting observations on fifteen cases of diabetes with disease of external genitals. Previously to recognising the relationship of pruriginous vulvitis with diabetes, his treatment was unsatisfactory; now, however, Carlsbad salts internally, and salicylic acid lotion externally, generally effect a cure.

Dr. B. Hicks (*Lancet*, vol 1, 1877, p. 456) has made some good observations upon the same subject, and, also, on the very frequent association of eczema with diabetes. Codeia has proved most valuable, in Dr. Hicks's hand, in allaying the irritation. Nothing approaches in value, in the reporter's practice, a solution of boracic acid as a local application. Professor Hardy (*Medical Times and Gazette*, July 1877, p. 98) reports on pruriginous and other affections of the genitals in both males and females as symptoms of diabetes. That such symptoms are frequently associated with diabetes is certain. At the present time three well-marked instances of pruriginous vulvitis, where no trace of sugar exists in the urine, are under the reporter's care.—*Rep.*]

RICHARD NEALE, M.D.

## RECENT PAPERS.

The Treatment of Sore Nipples. By Dr. Haussmann. (*Berliner Klinische Wochenschrift*, April 8.)  
On Ovariectomy. By Dr. A. Martin. (*Ibid.*, April 15 and 22.)  
On the Extirpation of Normal Ovaries. By Dr. M. Hegar. (*Wiener Medicin. Wochenschrift*, April 13.)  
The Operation of Gastro-hysterotomy; with a Tabular Record of Casarean Operations. By Dr. R. P. Harris. (*American Journal of the Medical Sciences*, April.)  
Rupture of an Abdominal Cyst by Palpation. By Dr. J. B. Chadwick. (*Boston Medical and Surgical Journal*, April 18.)  
The Physiological Function of the Amnios: Rupture of that Membrane during Pregnancy: Chronic Choritis. By Dr. Alexis Lebedeff. (*Annales de Gynécologie*, April 1878.)  
Clinical Study on the Retention of the Fœtal Head. By Dr. Lizé. (*Annales de Gynécologie*, April 1878.)

## PSYCHOLOGY.

**HOLLER ON CYSTICERCUS CELLULOSÆ IN THE BRAIN OF A LUNATIC.**—This case is related at considerable length by Dr. Holler in Nos. 5, 6, and 7 of the *Allgemeine Wiener Medizinische Zeitung* for 1878.

A widow, aged 76, first became excitable 14 years ago. Maniacal attacks soon supervened with hallucinations of hearing; delusions of persecution followed, the intellectual faculties gradually lost their power, the patient had no memory for recent events, etc. She had lived alone for many years, though she was known to have delusions and hallucinations. One day, in January of the present year, it became necessary to break open her door. She was then found lying on a heap of rubbish on the floor, surrounded by cats (both dead and alive) and all manner of filth. A few days later she was admitted to the asylum; her mental state was found to be as given above; there was a tumour as large as a man's head in the right side of the abdomen; the patient had a cough, and suffered from shortness of breath; large moist râles were heard all over the chest. There was no history of insanity in the patient's parents or grandparents, but one of her three brothers had died demented.

Six days after her admission the patient died, with aggravated symptoms of dyspnœa. At the necropsy, it was found that the skull was compact, somewhat thickened, and strongly adherent to the dura mater; the pia mater and arachnoid were slightly clouded; the convolutions were somewhat wasted; the cerebral substance was tough; the ventricles were rather dilated, and contained clear serum. In the membranes, and also in the brain itself, were found several examples of cysticercus cellulosæ, some in good condition, others degenerated and shrivelled; they were discovered in the corpora striata of both sides, and in both the grey and the white matter of the convolutions. One was seen in the cerebellum. The abdominal tumour was found to be of a fibrous nature, and developed from the right ovary; the peritoneal cavity contained a large quantity of sero-purulent fluid; the surface of the peritoneum was actively congested, and many adhesions had formed. Cysticerci were also found in the muscles of the back.

The question arises whether the cysticerci in the brain were in any degree the cause of the psychosis? The answer is doubtful, for it often happens that atrophy of the brain is the only morbid appearance found in cases similar to the one in question; on the other hand, cysticerci are frequently seen in large numbers, both on the motor ganglia and the cortical



substance, without their having given rise to psychic disturbance. In illustration of this last proposition, the writer cites two recent cases reported by Dr. Chiari; in one, numerous cysticerci had been found both in the brain and in the meninges; in the other they were only in the latter, but had attained the size of nuts; in neither of these cases had the cysticerci caused mental disturbance.

The source of the parasites in the author's case could not be ascertained. The intestines were carefully examined, but no *tania solium* was found; had there been one, it could not have been a matter for surprise, considering the unclean manner of the patient's life, and the fact that she regularly purchased "cats' meat", which might have contained measly pork, for her pets.

**BOODLE ON "MYSTIC MEMORY".**—In a paper published in the *New Dominion Monthly*, Montreal, Feb. 1878, Mr. Boodle treats of a mental feeling, sometimes called "sense of prescience", by which conversations listened to, and places seen for the first time, seem perfectly familiar. The author alludes to the fact that this feeling, though described by Sir W. Scott, Coleridge, Tennyson, Lord Lindsay, and Tupper, has never been seriously investigated. A string of letters upon the subject occurs in the second and third series of *Notes and Queries*, in which, and in Dallas's *Gay Science*, "four theories are enunciated with confidence by their various authors; but there has been no regular discussion of the difficulties that beset the question".

This sensation must be either founded upon fact, or it is an hallucination. Considered as a result of facts, three possible explanations are offered; the pre-existence theory, the dream theory, and the waking theory. Each of these is discussed in full; but it is suggested that the pre-existence theory is untenable in an age like the present, and it is shown that the waking theory (which supposes the scene recalled to have been actually witnessed at some previous time in real life) ignores the facts of the case. The dream theory has a greater show of evidence in its favour, and receives a certain amount of support from Scott, Tennyson, Elihu Rich, and Rousseau. In any manual upon the subject, facts are given to prove that the brain is often more powerful in hours of unconsciousness than at other times. The common sense of most people, however, rejects as impossible the supposition that the human mind is able, under any conditions, to project itself into the future.

It is found that bodily weakness and mental weariness are the conditions usually attending this feeling. Treating it, then, as an hallucination, Mr. Boodle suggests three theories, which he calls, "the simultaneous impression theory, the double impression theory, and the reflex impression theory". This last has nothing but an analogy in its favour, and the same argument seems equally to support either of the other two. Dr. Wigan, in a book upon *The Duality of Mind*, published in 1844, gives what seems a very probable solution of the question. The brain is double; each hemisphere has distinct powers and acts singly. In a state of enfeebled mind only one hemisphere is at first active; an impression is produced upon it, which is instantaneously effaced, but again revived when the other hemisphere commences to co-operate with its fellow; hence, comes the consciousness of having beheld the scene before. The original impression upon the one hemisphere is so faint that a long time seems to have elapsed between

the two impressions. Both halves of the brain are at work at once, but not in full co-operation; the intellect perceives the two impressions, selects one as genuine, and relegates the other to the past.

But it is objected that a double impression produced by the same object upon the mind at the *same time* seems almost an impossibility. The mind has not the duality which we know belongs to the senses, and such a double impression, could it occur, would only leave a blurred result; least of all, it is considered, could it produce the sensation described as mystic memory.

Finally, as a result, if the dream theory be discarded, there is nothing left but "the conviction that this sense is merely an hallucination, arising out of the half sleeping action of the brain". The data given in this paper for the support of each theory or explanation are rather suggestive than exhaustive; the whole treatment of the subject is calculated rather to excite discussion than to favour any particular theory.

**KOEPPE ON REFLEX PSYCHOSES.**—Dr. Koeppe (*Allgemeine Zeitschrift für Psychiatrie*, Band 34, Heft 2) says that the theory of reflex epilepsy is known and recognised; a peripheral stimulus acts on a predisposed central organ and excites convulsions. Modern views make it allowable to substitute for epilepsy in the above, any other group of nervous symptoms, including psychoses. This substitution is not only allowable, *a priori*, but is confirmed clinically by the large number of cases of reflex psychoses previously recorded by the writer. The cases due to irritation of the fifth nerve caused by injuries to the head are among the most convincing. A new case of this kind is related.

The patient injured his right great toe in early youth. Until the time of the Franco-German war he remained well; but the forced marches of that campaign brought on a kind of neuralgia, starting from the scar. The patient became depressed and sleepless on finding himself unfitted for service; he was also supplied with insufficient food for a time, and returned home insane. For years he suffered from melancholic restlessness, and constantly described the most peculiar sensations as arising from the scar in his toe; *e. g.*, his whole right side was small, both halves of his body did not fit each other, the right half was hollow, and full of retained food and excrement; the scar in the toe hindered the circulation, etc. The excision of the scar in 1875 at once cured the psychosis, which had lasted until that time.

The disposition of the central organ was acquired during the war; the peripheral irritation was increased by the same cause. When the peripheral irritation was removed, the psychosis ceased.

**MESCHEDÉ ON ANATOMICAL LESIONS GIVING RISE TO HALLUCINATIONS.**—Dr. Meschedé (*Allg. Zeitschrift für Psychiatrie*, Band 34, Heft 2) says that the question as to the central or peripheral origin of hallucinations cannot be summarily answered. Hallucinations vary greatly in their importance and signification, and it is very probable that these differences to some extent arise from corresponding variations in the anatomical lesions to which they are due. Two cases are given. In one case, which had been marked by powerful hallucinations of smell, there was found after death, in addition to a number of other interesting appearances, marked degeneration (sclerotic shrivelling) of the olfactory lobes; in the other case, the chief feature

of which had been hallucinations of hearing, a localised degeneration of the auditory nerves existed, the rest of the brain presenting no marked changes.

**MAZOTTI ON A CASE OF CYSTICERCII IN THE BRAIN.**—Dr. Mazotti (*Archivio Italiano*, 1877) reports a case in which, at the necropsy, hundreds upon hundreds of cysticerci were found, partly in the dura mater, partly between the arachnoid and pia mater, and partly in the brain, which was literally crowded with them in almost all its parts. The cerebellum, medulla oblongata, the eyes, muscles, and all other parts of the body were unaffected.

CHAS. S. W. COBBOLD, M.D.

### RECENT PAPERS.

Contribution to the History of Epilepsy in its Relations to Mental Diseases. By Dr. Garemond. (*Annales Médico-Psychologiques*, Jan. 1878.)

Catalepsy Consecutive on Acute Mania. By Dr. Lagardelle. (*Ibid.*)  
The Measure of Individual and Social Responsibility in Criminal Cases. By Dr. David Nicolson. (*Journal of Mental Science*, April 1878.)

The Varieties of General Paralysis of the Insane. By Dr. W. J. Mickle. (*Ibid.*)

The Electro-neural Pathology of Insanity. By Dr. A. H. Newth. (*Ibid.*)

### TOXICOLOGY.

**OBERST AND RHEINSTÄDTER ON POISONING BY CARBOLIC ACID (ACUTE CARBOLISM).**—The following two cases of poisoning by carbolic acid have lately been reported.

The first case, communicated by Dr. Oberst of Augsburg (*Berliner Klinische Wochenschrift*, March 25), is that of a man 32 years of age, who was under treatment for a lacerated wound of the rectum, perforating the bladder, from which he had recovered, with the exception of moderate cystitis, which remained when the mishap occurred. One morning, about five and a half ounces of a 5 per cent. watery solution of carbolic acid were swallowed in mistake for a draught of Hunyadi water. The man immediately became unconscious, breathing laboriously; the face was pale, and covered with a cold clammy sweat, with convulsive twitching of the facial muscles, and trembling of the limbs; the jaws were firmly compressed, while the pulse was small, and almost imperceptible. By means of the stomach-pump a quantity of fluid, strongly smelling of carbolic acid, was removed, and the stomach was then washed out with about three pints of water; after which the patient became conscious, and was able to answer questions, though he was still very prostrate. He recovered in about three hours, when there remained some soreness and reddening of the mouth and gullet, with a burning pain at the epigastrium. The urine, which was passed voluntarily, showed traces of albumen, and assumed a dark green colour, which again disappeared in the course of the following day. Simultaneously all symptoms of cystitis disappeared entirely, and the patient made a good recovery.

In some general observations on carbolic poisoning, Dr. Oberst makes the following remarks. The symptoms of carbolic poisoning are most intense when the acid is subcutaneously introduced, and next when absorbed by the mucous membrane of the stomach or rectum. A dilute solution is more readily absorbed than the concentrated acid, owing to the

caustic coagulating action of the latter, which rather retards absorption. The acid, when absorbed, undergoes various hitherto unknown changes, and is then rapidly eliminated by the kidneys, imparting to the urine a characteristic dark green colour. Only a small portion is eliminated unaltered, and traces of it with the characteristic odour may be detected in the blood. Death is caused by asphyxia, in consequence of irritation and paralysis of the vagus and of the respiratory centre in the medulla oblongata. The fatal dose is as yet uncertain, but ranges between two to four drachms (15 to 32 grammes). The principal symptoms are great prostration with coma, a small pulse, convulsions, nausea, or vomiting, contracted pupils, etc. The treatment consists mainly in the rapid removal of the acid from the stomach by means of the stomach-pump, and washing out the stomach with water. Husemann and Ummethun recommend the compound of sugar and lime as the most efficient antidote.

The second case, reported by Dr. Rheinstädler of Cologne (*Deutsche Medicinische Wochenschrift*, April 13), occurred in a woman aged 31. After removal of a large fibroid tumour from the uterus, a weak (1 per cent.) solution of carbolic acid was daily injected into the wound, and also *per vaginam*. One evening, it was observed that after the solution had been thus injected, little or none of it flowed away, and at the same instant the patient uttered an exclamation and suddenly became unconscious, with tremor of the limbs, pallor of skin, clammy sweat, and intermittent laborious respiration, imperceptible pulse, etc. Stimulants (musk, ether), were injected subcutaneously, and the patient rallied. No accumulation of fluid, which had evidently passed into the abdominal cavity, could be made out. In two hours time the patient was able to swallow, and the next day she had almost wholly recovered from the above symptoms. There was, however, this peculiarity, that for some days afterwards there existed an irritative vesical catarrh, caused, doubtless, by the rapid elimination of a considerable quantity of the poison. The urine, which for the first twenty-four hours showed the usual dark greenish colour, now became acid and albuminous, depositing a thick sediment of pus. Potassic chlorate was administered for this, and in about ten days the cystitis disappeared.

This effect of the carbolic acid is therefore directly the reverse of that in the previous case, where it removed an existing cystitis, and is probably due to the larger amount of acid absorbed, which was probably not less than 75 grains. The case is further remarkable as showing the tolerance of the peritoneum, and its great powers of rapid and complete absorption. It is therefore advisable to employ, in tedious ovariectomy cases, some spray other than that of carbolic acid as a disinfectant.

W. J. TREUTLER, M.B.

**DESSAN ON POISONING BY CARBOLIC ACID: RECOVERY.**—Dr. S. H. Dessan relates in the *New York Medical Record* for April 13 the case of a child aged two and a half years, to whom he was called, on account of his having, ten minutes before, swallowed about a teaspoonful of carbolic acid, equal in strength to Calvert's No. 2 preparation. Immediately after swallowing it, he ran about the room crying; he then became unconscious, with his face livid, eyes staring, respiration slow and noisy, and foam at the mouth and nose. Sweet-oil was given; and when Dr. Dessan saw him he was still unconscious, breath-



ing slowly and noisily; there were râles in the larynx; the pupils were dilated and insensible to ergot, and he had slight twitching of the muscles of the limbs. More sweet-oil was given, and vomiting was excited by tickling the fauces. Consciousness returned in half an hour. He vomited several times, discharging a large quantity of food, and also mucus mixed with blood. Doses of subnitrate of bismuth and prepared chalk were ordered. On the fourth day he was well, with the exception of a little hoarseness; but, though cheerful, he did not yet care for solid food.

Dr. Dessan regards the following as the chief points of interest in the case: the fact of the stomach being full at the time the poison was taken, and so distributing it that it was not all absorbed at one time, nor allowed to seriously erode the mucous membrane of the stomach; the absence of spasmodic stricture of the cesophagus, which symptom has been observed in numerous cases of poisoning from carbolic acid; the tendency of the acid in its action to paralyse the pneumogastric nerve-centre; and, finally, the presence of the acid in the urine in the form of *carbolates* and not as *free* carbolic acid, as demonstrated by the tests. Some of the acid was probably eliminated by the bowels, as their contents were of a similar colour to the urine.

A. HENRY, M.D.

#### RECENT PAPERS.

Lead Poisoning at Pérat. By Dr. Balanda. (*Montpellier Médical*, March 1878.)  
An Attempt at Poisoning by Digitalin: Cure. By M. G. Beringer. (*La France Médicale*, April 13.)

#### DERMATOLOGY.

LINDSAY ON COLOURED EXUDATION IN ECZEMA.—Dr. Lindsay gives, in the *Medical Times and Gazette*, March 9, 1878, pp. 247, 273, details of a case where the dressings from an eczematous leg were stained blue, and occasionally green. The patient, aged 35, a tall, handsome, athletic man, had been subject to periodic attacks of eczema; and during one of his usual attacks, wherein the legs were affected, and which attack extended over several weeks, the various dressings applied to the leg, as well as the drawers, stockings, or other articles of clothing that became fouled, all assumed various shades of blue, sometimes of green, just as though they had been purposely stained with a solution of sulphate of copper or of indigo. That no deceit was practised was certain. No medicines were being administered internally at the time, and no local applications but simple water dressings were used. The urine was normal and free from colour. He was the subject of a certain degree of mental imbecility, the result of "cram" at sixteen years of age. Dr. Lindsay brought the case before the notice of Drs. M'Call Anderson and Peel Ritchie. To the former it was new; the latter gentleman had seen similar cases, and believed it might be due to renal inadequacy. In the concluding part of his interesting paper, Dr. Lindsay gives a good deal of useful information upon the literature of the pigmentary exudations in the different secretions of the body, viz., pus, urine, sweat, serous effusions, &c.; and, copious as are the references made to various observers, by the aid of the *Medical Digest*, the list might have been considerably enlarged. A well merited rebuke to the mischievously elaborate

classification of skin-disease constantly being made by dermatologists, terminates a paper full of instructive research.

CUMMING ON ALOPECIA AREATA.—This subject of alopecia areata is exhaustively treated by Dr. James Cumming in the *Practitioner* for February 1878. Beginning with the numerous synonyms of the disease Dr. Cumming enters fully into its etiology, history, and treatment. That it is a neurosis, appears the most reasonable conclusion. Four cases illustrating the value of Peruvian balsam ointment and tincture of steel internally concludes the paper.

RICHARD NEALE, M.D.

#### RECENT PAPERS.

On Psoriasis. By M. Hardy. (*Gazette des Hôpitaux*, March 28.)  
Scleroderma with Local Asphyxia of the Extremities and Leprosy. By Dr. Brochin. (*Gazette des Hôpitaux*, March 30.)  
On Scleroderma in Adults. By Dr. Caspari. (*Deutsche Medizin Wochenschrift*, March 23.)

#### REPORTS OF FOREIGN SOCIETIES.

##### SEVENTH CONGRESS OF THE SOCIETY OF GERMAN SURGEONS.

The seventh Congress of the Society of German Surgeons was held in Berlin last month, under the presidency of Professor von Langenbeck, who was again re-elected to the office, which he has held each year.

April 10. *The Application of the Antiseptic Method in Cases where Sepsis is already present.*—Dr. König (Göttingen) read a paper on this subject. If Lister's antiseptic method, intended at first only for the treatment of clean wounds, obtain a lasting value in surgery, it must soon be extended to cases in which inflammation and sepsis are already present; and in this respect it has already been strikingly proved to be useful. In many cases of suppurative inflammation of tendons, the necrosis of the tendons has been prevented by making, as early as possible, numerous incisions along the whole track of the inflammation, and thoroughly washing and rubbing the sheaths of the tendons with a 5 per cent. solution of carbolic acid; after which drainage-tubes were applied, and the limb, being suspended, was irrigated by the constant dropping on it of a weak solution of salicylic acid. In recent cases of empyema it was sufficient, according to Dr. König, to make an incision at the most dependent part, and resect a portion of rib, and then to wash out the pleura with a 5 per cent. solution of carbolic acid. To remove the secretion which re-accumulated, a drainage-tube was applied, the body being placed in a proper position, and the part was dressed antiseptically. The treatment of septic wounds, especially those complicating fractures, by means of powerful disinfection, with division and removal of the destroyed and dead parts, was illustrated by the account of a case of compound fracture of the thigh and leg, with gangrenous emphysema, in which life was preserved by amputation and the observance of the plan above mentioned. Such good results, however, could be obtained only by the abundant use of carbolic acid, as a result of which he had now and then met with toxic symptoms, never, however, ending in death. He discarded the

silk protective, and laid gauze direct on the wound or ulcer, in order to better obtain absorption and consequent disinfection of the secretions.—Dr. Bardeleben (Berlin) said that since 1872 he had used carbolic acid irrigation with the best results, in cases of the kind described by Dr. König. He had never seen special toxic symptoms, even after prolonged irrigation with carbolic acid, although most of his patients passed dark-coloured urine. A solution of thymol (1 part in 1,000, with the addition of some alcohol) had already been used in his wards in 1875, but had been given up, partly on account of the sweetish smell of the agent, and partly because it attracted swarms of flies. A renewed experience of thymol during the past year had taught him that the results obtained by it did not surpass those of a 1½ or 2 per cent. solution of carbolic acid. If thymol had not the unpleasant paralyzing action on granulations, it yet did not possess the higher antiseptic properties of unconcentrated (*e.g.*, 5 per cent.) carbolic acid solutions. To these, as well as to solutions of chloride of zinc (both advocated by Lister), surgeons had limited themselves in the disinfection of already putrid parts; and, if he had the choice, he would prefer chloride of zinc, as its action was more readily limited than that of carbolic acid.—Dr. Hüter (Greifswald) had, since 1869, used antiseptic irrigation with good results in the treatment of septic wounds. With regard to carbolic acid poisoning, he considered that strong solutions were more harmless than more diluted ones. Irrigation with carbolic acid was of special benefit in intermuscular phlegmon of the forearm, especially when combined with numerous buttonhole incisions. The success obtained by the use of carbolic acid irrigation in the case of a boy whose abdominal wall was injured by a threshing machine, had led him to use it in herniotomy; the result being that he no longer met with peritonitis after the operation, and that the wound healed by the first intention, so far as the part where the drainage-tube lay.—Dr. Küster (Berlin) had used thymol very extensively since the beginning of the present year, but had already abandoned it as an aseptic, on account of its failure. He especially ascribed two deaths after laparotomy to the use of thymol. Whether it would be found applicable in minor operations was very questionable, as it was quite as expensive for dressings as chloride of zinc, if not more so.—Dr. Olshausen (Halle) agreed with the observations of Dr. Küster respecting the use of thymol in cases in which the abdomen was opened.—Dr. Schede agreed with the previous speakers as to the good results of carbolic acid irrigation and the uncertainty of thymol. Whatever good results had followed the use of the latter, were perhaps in part to be explained by the fact that, in a hospital in which antiseptic treatment was rigidly carried out, all recent wounds showed no tendency to septicity. He had lately used hyposulphite of soda for antiseptic irrigation; it could be employed in a 5 per cent. solution, or even stronger, in any quantity, without fear of toxic action.—Dr. König said that there was a misunderstanding with respect to the use of solution of carbolic acid. He used it for washing, not for continued irrigation; for the latter he used salicylic acid.—Dr. Thiersch (Leipsic) regretted that none of those who had lately praised thymol were present to speak in its defence. He had made no special experiments with it, but he believed that the difference in its effects depended on the time during which and the manner in which it had been kept.—Dr. Bidder declared against the general use of thymol, which he

recommended only for washing out the cavities in empyema and abscess.—Dr. Wagner had seen three cases of empyema in which complete recovery took place in eight weeks, after treatment by double incision, the use of a drainage-tube, repeated washing out of the cavity, and gradual removal of the drainage-tube after eight days, until only a small piece was left in the opening.—Dr. Schede advocated resection of one or more ribs, both in children and in adults. In this way the diminution of the cavity in empyema was more rapid. He would use salicylic acid or thymol for washing out, only when symptoms of poisoning followed the use of carbolic acid.—Dr. von Langenbeck recommended thymol in the case of children, although wounds did not always run an aseptic course under its use.

*The Etiology and Treatment of Acute Inflammations (Acute Strumitis and Osteomyelitis).*—Dr. Kocher (Bern) had had fifty-two cases of acute osteomyelitis and twenty-six of acute strumitis, and, from the result of certain experiments, had become convinced that these inflammations, both in the deep-seated and the superficial forms, owed their origin to minute infective organisms. Between simple and so-called pernicious or infective osteomyelitis (Lücke) he saw only a gradual and unessential distinction. He had not succeeded in producing osteomyelitis by drilling the bone and applying chemical irritants; simple cicatricial sclerosis of the bone was the only result. By injection of putrefying matters, such as solution of albumen in which pieces of pancreas had been left for a week, the air being excluded, he had produced suppurative inflammation of the medulla, in which, besides the share of the putrefying fluid, micrococci were found. He had also succeeded in producing osteomyelitis in another way, which was more like the natural process. After irritation of the marrow of the bones, septic matters were introduced into the stomach of the animal. The animal became ill, and, when it was killed at the end of three weeks, purulent infiltration was distinctly found in the bone which had been irritated. He concluded from this that in man, in a similar manner, when there was a predisposition through injury or a cold, infection might be conveyed through the digestive canal, and affect the marrow. He referred to two cases of acute strumous disease occurring during the course of acute gastric catarrh. He had observed two cases in typhus, one in acute articular rheumatism, two after contusion of the thyroid gland, and nine after injection of iodine. In the treatment of purulent strumous inflammation, Dr. Kocher rejected incision, and recommended puncture with Pravaz's syringe, injection of carbolic acid, and the application of antiseptic dressing. Cases treated in this way ran a favourable course. He followed this plan in a case of osteomyelitis of the clavicle, with formation of abscess occurring eight days after injury, in a man aged 25, and complicated with pneumonia of the right lung, otitis of one rib, synovitis of one of the acromio-clavicular articulations, and abscess over one trochanter. The synovitis resisted puncture and the injection of carbolic acid, for some time; but recovery was at last complete.—Dr. König (Göttingen) said that a work on the same subject, from the pen of Professor Rosenbach, was in the press.—Dr. Lücke (Strassburg) said that he had already expressed the opinion that the infective character of inflammation of bone must be dependent on some other condition besides injury, cold, etc.; and he had named diseases of bone "infective" from their analogy with typhus, pyæmia, etc. In contradiction



to Dr. Kocher, he remarked that the question under consideration was not really osteomyelitis, but, as he had seen in Strassburg, although not in Bern, infective periostitis. This might occur in a nearly pure form, without implication of the marrow, and run as dangerous a course as inflammation of the medulla. He had never found micrococci in such large masses as were observed by Dr. Kocher. He regarded the infective inflammation of bone as possessing characters sufficiently well marked to distinguish them from ordinary osteitis; they had much in common with other infective diseases, in which secondary deposits were found.—Dr. Hüter (Greifswald) agreed with Dr. Kocher as regarded specificity, believing that the distinction between acute osteomyelitis and chronic carious disease of bone was only gradual.—Dr. Kolaczek (Breslau) was of opinion that the assumption of the introduction of putrefactive bodies through the alimentary canal was not necessary in all cases of osteomyelitis.—Dr. F. Busch (Berlin) had endeavoured, by numerous experiments, to show that thermic, chemical, and mechanical irritants might produce the most severe forms of inflammation of bone, without the addition of other evil influences. If provision were made for the escape of injected fluids from the medullary canal, by means of a second perforation, even putrid fluids had only a local action.—Dr. Schede (Berlin) remarked that the absence of micrococci, in a case related before the Berlin Medical Society by Drs. Friedmann and Senator, was opposed to Dr. Kocher's view of infection by these organisms in osteomyelitis.—Dr. Hüter remarked that Dr. Busch's experiments on bone had not been carried out with antiseptic precautions. His own experiments, made according to Lister's principles, agreed in all respects with those of Dr. Kocher. The non-existence of minute organisms was more easily alleged than proved, for micrococci were found even in the interior of pus-corpuscles.—Dr. Max Wolff (Berlin) was inclined to be sceptic as to micrococci in osteomyelitis, as he had found nothing of the kind in two cases.

*The Toxic Properties of Carbolic Acid in Surgical Use.*—In the course of four years' experience of the antiseptic treatment, Dr. Küster (Berlin) had met with five cases of poisoning by carbolic acid, four of which were fatal. On examining the literature of the subject, he had found seven mild cases of carbolic acid poisoning with one death, and thirteen severe cases with five deaths. His first case occurred in a woman aged 23, who had a stricture of the rectum, in the treatment of which the parts were repeatedly washed with a 2 per cent. solution of carbolic acid. This was twice followed by collapse, which was so severe the second time, that she only recovered after employing artificial respiration for an hour. She died soon afterwards of pyæmia, and at the necropsy a large abscess-cavity was found surrounding the rectum, which might have contributed to the retention and absorption of the injected fluid. In a second case, the washing out of an empyematous cavity in a child with a two and a half per cent. solution of carbolic acid was followed by collapse, and death in three hours. In a third case, a woman aged 39 had pelvic periostitis and discharge of pus through the bladder. Incision and washing out the cavity with solution of carbolic acid was followed by collapse and a fall of temperature to 35 cent. (95 Fahr.), and a second irrigation with a 5 per cent. solution, the next day, was followed by sudden death. The fourth case was one of resection of the hip in a child aged four and a half, who died unexpectedly the next day.

The fifth death occurred in a woman aged 33, who, in consequence of erysipelas following an injury of the leg, had a large abscess under the right gluteus muscle, and suppuration of one knee. Death took place four hours after the suppurating cavities had been opened and injected with solution of carbolic acid. Not being able to ascribe these sudden deaths to shock, he made some experiments, to determine the question whether, as was probable, carbolic acid exerted a poisonous action in such cases. It had already been established by the experiments of others that cold-blooded animals were killed by small doses, while warm-blooded animals required larger quantities, ten to twenty grammes (two and a half to five drachms), according to the French, while Husemann had calculated the fatal dose for dogs at 0.5 *per mille* of the weight of the body. Dr. Küster had found that, in relation to the body-weight, the smallest immediately fatal dose was 0.036 per cent., the largest 0.075 per cent. of a 5 per cent. solution of carbolic acid injected into the blood. The injection of seven and a half grammes was followed by trembling, of ten grammes by convulsive movements, and of fifteen grammes by loss of consciousness; half an hour or an hour later the animal recovered. Larger doses produced also loss of reflex irritability; this agreed with Salkowski's experiments, in which irritation was first produced and then paralysis. In man, as in cold-blooded animals, there was no trembling, but there was the well known dark olive-green colouring of the urine—a hitherto unexplained phenomenon—especially after the external use of carbolic acid; there were also gastric symptoms, headache, vertigo, vomiting, increased secretion of saliva, changes in the pupils (more frequently mydriasis), dysphagia, a rise of temperature with small doses, a fall with larger doses, and a rise after the use of the remedy, or a further fall until death occurred. Dr. Küster was inclined to refer the so-called aseptic fever of Volkmann partly to the action of carbolic acid; and he also suspected the existence of a carbolic marasmus, leading to death. Just as in diseased animals small doses led to fatal poisoning, so in anæmic subjects, exhausted by loss of blood, the poison acted more intensely, in consequence of being more readily absorbed. Carbolic acid was especially ill borne in septic fevers, and also in children, who were often in a cachectic state when brought under treatment. There was a local as well as an individual predisposition to easy absorption. Pneumonia and œdema of the lungs were mentioned as sequelæ of carbolic acid. Glauber's salt had been recommended as an antidote, but, according to Dr. Küster, was useful only in mild cases. He had not been able to avert death by following carbolic acid injection by an injection of the salt, nor by injecting a mixture of the two in solution. He recommended the greatest caution in the use of carbolic acid. In all possible cases he substituted for it chloride of zinc, which, even when used in strong solution (8 per cent.), did not interfere with union by the first intention. He counselled caution in washing the abdominal cavity, and advised that, for children, the strength of the solution of carbolic acid should not exceed 1½ per cent.—Dr. Lücke believed that mild forms of carbolicism were frequent, but he had never seen a fatal case. The peculiar colour of the urine could not always be taken as a guide, since it often only appeared after several hours exposure to the air. A more sure test was the use of sulphuric acid and chloride of barium; the absence or deficiency of the white deposit of sulphate of baryta indicated that a

certain amount of sulphocarbohc acid had been formed (Sonnenburg). In his experience, the carbolic acid spray produced slight toxic symptoms. He also believed that he had met with a carbolic nephritis, especially in children, and also in an adult.—Drs. Bardeleben, Koenig, and Hüter had never observed dangerous carbolism. The former recommended mixtures of carbolic acid and sulphate of zinc, and jute impregnated with a 5 per cent. solution of chloride of zinc; the latter recommended the stronger solution of carbolic acid, which more quickly produced coagulation.—Dr. Olshausen had seen in a parturient woman, with rupture of the cervix uteri, carbolism, with loss of consciousness, mydriasis, twitchings of the muscles, but with normal action of the heart and respiratory organs, produced by once washing the uterus with a strong solution of carbolic acid; the symptoms apparently disappeared after three hours. Death, however, soon followed, in consequence, as the necropsy showed, of the passage of carbolic acid into the peritoneal cavity. It was remarkable that an unsparing use of the carbolic acid spray was, as a rule, borne well, while, when he changed his dressings for the first time at the end of five or six days, the result not unfrequently was the appearance of carbolic acid in the urine. He could only explain this by assuming that, under Lister's dressing, the skin was relaxed, and its absorbent power increased. In another lying-in woman, the washing out of a pelvic abscess and the hourly application of pledgets of cotton-wool, soaked in a 2 per cent. solution of carbolic acid, were followed in twelve hours by carboluria and collapse; the use of a 5 per cent. solution on the next day was followed by a return of the symptoms, and by death.—Dr. Hahn had seen the application of carbolised jute in a case of gunshot fracture of the arm, followed by nephritis, which disappeared when the treatment was abandoned.—Dr. von Langenbeck recommended great care in the use of carbolic acid. In some persons the existence of idiosyncrasy was beyond doubt. He had met with two fatal cases of carbolic acid poisoning in children in hospital practice.

*Experimental and Anatomical Researches on Erysipelas.*—Dr. Tillmanns (Leipsic) had made forty-two experiments on dogs and rabbits, with the object of answering the following questions. 1. Is erysipelas communicable from man to animals, and from the diseased to the healthy subject? 2. What effect has carbolic acid on the infective material? 3. In what way does erysipelas manifest itself in a healthy animal? As the infective material, he used the fresh and dried contents of erysipelatous vesicles, and also the pus of consecutive abscesses, which he introduced into animals by inoculation, and by cutaneous and subcutaneous injection. Small quantities of material applied to fresh or granulating wounds produced no effect. Injection of greater quantities, by means of very fine syringes, produced erysipelas in two cases only at the end of twenty-four hours; in one erratic, in the other recurrent. The animals were previously healthy; there was a very small amount of sloughing at the points of injection. Erysipelas of two days' duration was produced in one case by inoculating with the blood of these animals. The use of the dried contents of vesicles produced in one case only a doubtful result; the use of pus gave rise to abscesses, but to nothing like erysipelas. When the infective fluid was mixed with carbolic acid, its power was entirely lost. No fluid, however putrid, was found capable of producing erysipelas; it usually caused the early death of the

animal, without any noteworthy change in the part where the injection was made. As Dr. Tillmanns could not, as a rule, find bacteria on microscopic examination of the erysipelatous portions of skin, he considered that they were not the cause of the disease, but rather a symptom.—Dr. Hüter, in support of the favourable action of carbolic acid in erysipelas, referred to his method of treating the disease by subcutaneous injections of a 3 per cent. solution of this remedy. He had injected as much as twelve charges of Pravaz's syringe at one sitting. This treatment was especially useful at the beginning of the disease.—Dr. Wolff had nine times had erysipelas of the arm, in consequence of slight injuries of the fingers. It always appeared on the upper arm, and spread rapidly, but soon disappeared under the local application of compound tincture of benzoin.—Dr. Strahler had seen erysipelas communicated by vaccinating from two children, who had erysipelas after vaccination. Twenty-five children were attacked, and four died. A similar fact had been noticed by a physician in St. Petersburg.

*Scrofulous and Tuberculous Inflammation of Joints.*

—Dr. Hüter (Greifswald) dissented from the view, based essentially on experiments on animals, that there was a marked distinction between scrofula and tubercle, and that tubercle might arise quite locally, and remain localised. He alleged, on the contrary, on the ground of clinical observation, that scrofula not unfrequently passed on to tubercle, and that originally localised tuberculosis might lead to general infection. He further found, by inoculating the cornea of rabbits with masses of tubercle from the synovial membrane of a knee, removed on account of white swelling from a patient who also had bronchitis, that, even after the disappearance of the keratitis and of the tubercle in the anterior chamber of the eye, general tuberculosis began to appear at the end of fifty-one days. On the other hand, by repeating the inoculation with the cheesy substance from the fistulous passages of scrofulous ulcers, he obtained still more positive results. After thirty days, numerous tubercles were developed, not only on the iris in each eye, but also in the lungs. He therefore regarded the prognosis of so-called local tuberculosis as altogether bad. The view of the general character of scrofula was supported by the clinical fact that scrofulous ulcers, in spite of all operative procedures, and though they might at first have a favourable appearance, soon returned to their old condition.—Dr. Czerny observed that, in laying open a chronic abscess above Poupart's ligament, the peritoneum was accidentally wounded, so that the cæcum came into contact with the purulent mass. The abdominal wound was sutured; erysipelas indeed did not appear, but the patient died suddenly eight weeks afterwards in a state of delirium, with tremor. The necropsy showed circumscribed peritonitis and miliary tubercles in the lungs and meninges.

*Displacement of the Urinary Bladder in Simon's Method of Rectal Palpation.*—By introducing into the rectum an India-rubber bag inflated to the size of a man's fist, Dr. Braune (Leipsic) obtained the conditions produced by Simon's method of rectal manipulation. On examination of the body after freezing, it was found that the internal orifice of the urethra was pushed forward as far as the upper border of the pubic symphysis, the prostatic portion of the urethra being much stretched, and the prostate itself flattened.

*The Temperature in Fungous Arthritis.*—Dr.



König (Göttingen) said that, while there were abscesses which were unattended with fever, a series of careful observations which he had made for many years showed that the commencement of suppuration in a chronically inflamed part was always attended with the appearance or the increase of fever. While the pus, especially in young persons, might be reabsorbed, suppuration was in general an unfavourable sign, and indicated that resection should be no longer delayed.—Dr. Schede, on the other hand, regarded the temperature curve as not giving indications of value in fungous arthritis, as he had observed fever and nocturnal twitchings when there was no pus in the joint, as could be proved by puncture; the symptoms were then indicative of central inflammation in the epiphysis.—Dr. Lücke disputed the value of exploratory puncture in fungous arthritis, as the suppuration might be limited to a recess, while the rest of the joint might contain synovia. It would also be necessary to use a rather large trocar, if the pus were thick and flocculent.—Dr. Hüter could give a general confirmation to Dr. König's remarks, as he had many times seen abscesses formed under the plaster of Paris dressing without any fever.

*Neuralgia of Joints.*—Dr. Koch (Berlin) said that the results of division of the spinal cord on one side were not exhausted with the occurrence of hyperæsthesia of the skin, since along with it there was also a marked increase of sensibility in the fasciæ, periosteum, and especially the joints. He said that the injury was at the level of the third lumbar vertebra when the hyperæsthesia manifested itself in the lower limbs; that hyperæsthesia of the trunk and upper limbs was the result of injury of the spinal cord at the level of the sixth cervical vertebra; and that the results of lateral division of the spinal cord were obtained by section of Flechsig's lateral cerebellar cords (*Kleinhirnsseitenstrungsbahnen*), lying to the inner side of the lateral columns of the cord. It was also possible to produce cutaneous and articular hyperæsthesia separately, by limiting the injury to certain portions within the lateral cerebellar cords. Nothing like hyperæsthesia could be produced by the most varied experiments on the larger nerve-trunks. The fibres, whose destruction in the spinal cord rendered disturbance of sensation possible, did not decussate before reaching the medulla oblongata; those belonging to the upper limb passed from the cord as far as the sixth cervical vertebra, while those for the lower extremity began to escape at the level of the upper part of the lumbar portion of the cord. With regard to the absolutely similar position of the lateral cerebellar cords in man and in the higher mammalia, it had to be ascertained whether neuralgiform affections of the joints might not be observed in man of a precisely similar character to those produced artificially in animals—namely, affections in which, in an apparently perfectly healthy joint, pains of neuralgic intensity occurred on moving the joint, and ceased immediately on the cessation of the irritation. Remarking that the affection generally complicated several joints, and was confined to one half of the body, Dr. Koch explained why the joints were not attacked symmetrically, and called attention to the simultaneous occurrence of disturbances of sensation in the skin and periosteum. He cited some recorded cases, which confirmed the clinical importance of diseases produced by experiment. Hyperæsthesia of joints was to be distinguished from neuralgia, in the strict sense of the word. Dr. Koch sketched the differential diagnosis between the two affections, and showed how already a number of

well known portions of the brain and spinal cord might be named, the destruction of the continuity of which, whether by injury or by inflammation, or only temporarily by disturbances of the circulation, was capable of producing the phenomena referred to above. Experiment could not determine whether purely inflammatory changes, or partial division of the peripheral nerves, were to be regarded as a third factor in the etiology of hyperæsthesia of joints. With regard to treatment, Dr. Koch said that powerful electric irritation of the skin was capable of at once relieving hyperæsthesia of the joints. The affection, however, returned as soon as the irritation ceased, and it was not determined whether recovery was hastened by this treatment. Dr. Koch had seen some effect produced by the introduction of watery solutions of saponin into the joints; narcotics he had found to be quite powerless. The paper concluded with the account of some experiments on the production of hyperæsthesia in joints.—Dr. Esmarch (Kiel) expressed the opinion that the central disturbances producing neuralgia of joints in man must, considering the general tendency to recovery, be at least frequently trivial in character, being perhaps connected with the vaso-motor system. This perhaps explained the occurrence of transient œdema in the neighbourhood of joints.

*Laparotomy under Lister's Antiseptic Method.*—Dr. Czerny (Heidelberg) related ten cases of laparotomy which he had performed, in which, in spite of the use of antiseptic dressings, he had not in all cases been able to ensure an aseptic course. Of six cases of ovariectomy, one patient died of septic peritonitis, following sloughing of the pedicle, which was ligatured and returned into the abdomen. For ligature he used silk treated with carbolic acid; in the remaining five cases, in all of which the pedicle was returned and drainage was not applied, this ligature answered well, and was absorbed. Removal of the peritoneal exudation and washing out the abdomen with disinfectants produced some improvement, but failed to ward off death. In two cases of supravaginal hysterectomy for uterine myomata, in which the pedicle was fixed in the abdominal wound, in a case of slow peritonitis following an operation done in consequence of a wrong diagnosis, and in a case of unsuccessful attempt to remove a tumour lying in the neighbourhood of the bifurcation of the aorta, an aseptic course could not be obtained, although none of the four cases ended fatally.

*The History of Complete Extirpation of the Scapula.*—Dr. von Adelman (Dorpat) read a paper on sixty-one cases of total extirpation of the scapula which he had collected, and commented on the principal clinical parts. He remarked that it was an especially encouraging fact that this operation, formerly feared as very dangerous, had been performed with comparative frequency during the last twenty years, with good results.

*Improvement of Speech after the Completion of Uranoplasty.*—Dr. Passavant (Frankfort) described a new method of effectually curing the nasal speech left after uranoplasty, however well performed. Schwenborn had obtained an essential improvement of speech by transplanting a flap from the pharynx into the defective portion of the palate, but his method appeared to have been but little used. Dr. Passavant first endeavoured to render more perfect the division between the nasal and pharyngeal cavities by uniting the pharyngo-palatine muscles; and afterwards, with much better effect, by uniting the free edge of the soft palate with the posterior wall of the

pharynx. He now simplified this latter method by first separating the soft from the hard palate, and closed the resulting defect with an obturator. In this way he had some time ago treated a girl with considerable defect in the palate, and enabled her to obtain a situation as a companion and reader.

A morning meeting was held on April 10 in the lecture-theatre of the hospital, and was devoted to the demonstration of cases and specimens.

*Treatment of Spinal Curvature by Sayre's Method.*

—The President, Dr. von Langenbeck, showed a patient suffering from Pott's disease of the spine, who had been treated with Sayre's plaster-jacket. The results which had been obtained by this method were on the whole satisfactory; ulceration, however, was liable to occur where the jacket was not well padded, or where the vertebræ projected. Attention must, therefore, be paid to complaints made by the patient, and the dressing must be renewed in proper time.—Dr. Hahn (Berlin) had at first feared to use extension in cyphosis, but its good result in a case of wry neck following disease of the cervical vertebræ had led him to adopt the plan, in suitable cases, of temporarily placing the patient on an inclined plane, the head being fixed by a collar. By giving more or less inclination to the board, the degree of extension could be pretty well regulated.—Dr. von Langenbeck approved of the extension method in spondylitis; but by this he meant gradual extension, not occasional suspension in Glisson's apparatus, forcible stretching, etc., which might produce irritation of the diseased spine, luxation of the vertebræ, etc. Extension by weights was indicated only in cases where children were obliged to keep the recumbent position, as, e.g., from paralysis: in all other cases, Sayre's plaster-of-Paris jacket had the advantage of allowing the little patient to move about.—Dr. Hüter (Greifswald) asked Dr. von Langenbeck if he agreed with Dr. Sayre in believing that the plaster-of-Paris jacket acted chiefly by fixing the ribs. He believed that this was impossible without interfering with respiration.—Dr. Schede (Berlin) had in 1870 described the excellent results of extension by weights, under which, especially in caries of the cervical vertebræ, paralysis was removed in a few days. Extension was less useful when the disease was situated below the cervical vertebræ.—Dr. von Langenbeck agreed with Dr. Hüter that Sayre's jacket did not prevent the movements of the ribs, although it limited them. He considered Sayre's apparatus preferable to extension, even in cervical caries, if the children could walk alone, so that they might not be unnecessarily confined to bed.—Dr. Esmarch (Kiel) had found Sayre's apparatus extremely useful, especially in cases of chronic abscess; but he had not yet ventured (as Dr. von Langenbeck had done) to apply it during anæsthesia. He asked Dr. von Langenbeck how he managed the patient's arms.—Dr. von Langenbeck had the arms supported by crutches in the axilla. With regard to anæsthesia, it was very well borne, and indeed must be as deep as possible, so that the spinal projection might be more effectually diminished.

*Disarticulation at the Elbow-joint.*—Dr. von Langenbeck showed a case in which this operation had been performed. Although the operation was in much discredit, he had for several years performed it in all cases in which it was possible. He made an anterior flap. He was very careful to endeavour to procure union by the first intention, and for this certain precautions were necessary. The skin about the elbow was so retractile that, in order to obtain suffi-

cient covering for the stump, the incision must be made at least two-fifths of an inch below the epicondyles. The flap thus formed consisted only of skin and fascia. The separation of the ulna with the olecranon from the fossa of the humerus was very easy, if, after pushing the flap up and opening the joint, the knife were carried obliquely upwards so as to divide the lateral ligaments. The arm being then extended, the olecranon was exposed. The operation was completed by dividing the tendon of the triceps extensor muscle. The patient shown had been operated on more than a month previously for sarcoma of the ulna, and was doing well.

*Disarticulation at the Knee-joint.*—Dr. von Langenbeck showed two patients on whom this operation had been performed. Under the present system of dressing wounds, it was attended with much less danger than amputation at the lower part of the thigh, and the result as regarded utility of the limb was very good. Disarticulation at the knee was indicated in cases of entire or partial destruction of the joint, and in cases of injury of the leg not implicating the knee. In the first case, the leg being strongly bent, the articular surfaces of the femur were simply removed. He had performed this operation three times since 1851, with satisfactory results in all the cases. The operation had been done by him in seven cases with uninjured joint since 1871; in the case now shown the patella had been preserved. He submitted the question of the preservation of the patella, in cases where the knee-joint was uninjured, to the Society for discussion; as, even under antiseptic treatment, the bursa of the quadriceps could not remain unopened, but must be drained. He would always remove the patella along with the bursa and the whole of the capsule, although in his seven operations he had had two deaths, as well as a case of pyæmia.—Dr. Uhde (Brunswick) who had had twelve cases of amputation at the knee, as well as several of disarticulation at the elbow, recommended the preservation of the patella. He had lost only one or two patients; all his cases of disarticulation at the elbow had recovered.—Dr. Lücke (Strasburg), who had seen sloughing at the anterior flap in two cases of amputation at the knee-joint, asked whether this might be obviated by leaving the patella, or whether any other method than that by anterior flap could be followed.—Dr. Schede, who remarked that amputation at the knee-joint was not sufficiently practised in Germany, believed that in it healing by the first intention was ensured by antiseptic treatment, and that it was seldom if ever followed by atrophy of the stump, such as occurred after amputation through the femur. With regard to the question of total extirpation of the capsule along with the patella, he was of opinion that the retention of the synovial membrane was of little importance, while on the other hand there was no special indication for removing the patella. The mortality after disarticulation at the knee-joint lessened yearly; according to Andrews, of Chicago, it was now not greater than that after amputation through the condyles.—Dr. von Langenbeck would perform disarticulation at the knee in place of amputation of the thigh high up, in cases where an artificial foot would have to be used. Differing from Dr. Uhde, who advocated Velpeau's modification of the circular incision, he recommended an anterior flap, the only disadvantage attending which was that the process of union by the first intention was liable to be disturbed by muscular spasm.—Dr. Riedinger (Würzburg) had seen sloughing of the flap in the last two cases of disarticulation



at the knee performed in Würzburg; one patient was a blooming girl ten years old.—Dr. Thiersch (Leipsc) recommended the fastening of the patella with pegs as a means of counteracting muscular cramp. He asked Dr. Riedinger whether the sloughing in the cases to which he referred affected the entire thickness of the soft parts.—Dr. Riedinger replied that it did.—Dr. von Langenbeck had as yet never seen sloughing of the flap. In reply to Dr. Thiersch's suggestion of fastening the patella, he said that he attributed the muscular spasms to the flexors rather than to the extensor quadriceps. He used antiseptic dressing in the after-treatment, but it did not entirely prevent muscular twitchings.—Dr. Bardeleben (Berlin), and Dr. König (Göttingen) agreed with this remark.—Dr. Roser (Marburg) had done disarticulation at the knee four times without one death.

*Resection of the Knee-joint.*—Dr. von Langenbeck showed a girl aged three years, on whom he had operated a year previously, by making a semilunar incision on the inner side, extirpating the capsule of the joint with the bursa of the quadriceps, and sawing off the articular surface of the patella. The growth of the limb had not decreased, as about four-tenths of an inch had been removed, and there was shortening to the extent of about one-fifth of an inch.—Dr. Petersen (Kiel) had found in a case in which he performed resection of the knee three years ago, with retention of the epiphysal cartilage, that there was increase in length to the extent of more than an inch.—Dr. Riedinger (Würzburg) had preserved the patella in one case, freshening its surface and those of the femur and tibia, and fastening the bones together.—Dr. König (Göttingen) had, in the course of eight or nine years, met with no case of shortening after preservation of the epiphysal cartilage, although he had observed flexion of the limb, depending apparently on bony, but in reality on cartilaginous ankylosis. He advised that the surgeon should endeavour to obtain a stiff and not a movable joint, and that the incision should be transverse.—Dr. von Langenbeck preferred the inner semilunar incision, by which he had been enabled to preserve the muscular structures and the mobility of the joint, and which also facilitated the extirpation of the pouch of the synovial membrane. The later object was fulfilled with more difficulty by transverse division of the patella, as recommended by Volkmann. His ultimate object was always to obtain a movable joint, as ankylosis interfered with the growth in length of the bone.—Dr. Hüter was in favour of the anterior flap. The whole should be within view, so that not only might the articular cartilages be removed, but carious foci in the tibia—frequently the starting point of the whole disease—be discovered and scooped out. With this he combined drainage of the tibia, after opening its anterior surface with an American drill. Of five recent cases, he had obtained good motion in three; he removed the patella, but cut the ligamentum patella obliquely, so as to favour its union by first intention, and preserve the muscular apparatus.—Dr. Kocher (Bern) had performed resection of the knee-joint twenty-five times with three deaths. He had occasionally met with shortening, in spite of the preservation of the epiphysal cartilages. He believed, with Dr. Hüter, that the antiseptic method was more favourable than the open treatment to obtaining movable joints. He had had deaths with the antiseptic method, but none with the open treatment.—Dr. von Langenbeck always used extension when the dressing was applied, so as to

leave an interval between the sawn surfaces of bone; the wound was closed by suture as far as the part where the drainage-tube was inserted. Dr. Schede had brought the sawn surfaces of bone together, partly by catgut, partly by silver wire, but had never obtained bony ankylosis.—Dr. Hüter regarded a certain degree of mobility in the new joint as the best means of obviating an angular position of the limb. Oblique division of the ligamentum patellæ was followed by firm union, with the help of which the quadriceps extensor acted on the leg.—Dr. König believed that mobility had nothing to do with the adhesion of the ligamentum patellæ. He followed antiseptic principles strictly in the after-treatment.

*Enterotomy.*—Dr. von Langenbeck showed a patient on whom he had performed enterotomy last May, and who wore an India-rubber bladder as an obturator to the artificial anus. He called attention to the importance of providing a sufficient closure for the new opening. In a case of colotomy, performed on a child for absence of the rectum, and which was in other respects successful, death had occurred from prolapse of the intestine, in consequence of the want of a proper obturator.—Dr. Trendelenburg (Rostock) had performed enterotomy three times, and considered it much less dangerous than colotomy, in consequence of the injury to the soft parts being less. For the closure of the fistula, remaining after gastrotomy, he recommended a drainage-tube provided with a stopcock, which could be fixed securely in a perpendicular direction by means of a ring of cork.—Dr. Czerny (Heidelberg) thought that, independently of the connection in size between the prolapsed portion of bowel and the opening, the prolapse was always absent, or very small, when there was adhesion of the serous membrane above the opening.—Dr. von Langenbeck said, in order to prevent misunderstanding, that in the case of the child to which he had referred he had not performed Amussat's operation, but had opened the flexure of the colon. He had made the opening very small, and he believed that the prolapse was the result of invagination. A means of preventing prolapse, not unattended with danger, but certain in action, was the use of a plug to be inserted into the intestine. One of his patients had for some years used this plan with success.—Dr. Riedinger mentioned a case of artificial anus after incarcerated hernia, in which adhesion of the different and efficient portions of the bowel was followed by prolapse.—Further remarks on the subject were made by Drs. Thiersch, Lossen Küster, Hüter, König, Bardeleben, and Uhde.

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#### ACADEMY OF MEDICINE IN PARIS.

March 19, 1878. *Charbon and Virulence.*—In a former communication (see LONDON MEDICAL RECORD, October 1877, page 426) M. Pasteur had noted the difficulty, or even the impossibility, of inoculating birds, more especially fowls, with charbon. He attributed this to the high temperature of their bodies, and now brought forward a striking proof of it. Two hens having been inoculated, immediately after inoculation was performed, the temperature of one was lowered, by plunging the lower third of its body into a cold water bath. It died the next day; its viscera filled with anthracoid bacteria; whilst the other survived. The death of the first was, undoubtedly, due to the inoculation, seeing that a third hen, which

had not been inoculated, but which had been placed in a bath for the same period, and at the same temperature as the one which died, remained in perfect health. It remained to be ascertained, as a counter proof of it, whether, by raising the temperature of an animal which had been inoculated with charbon, it would not be possible to prevent the development of the microscopic organism, and consequently, to save its life. According to M. Pasteur, the temperature at which the bacteria could no longer be developed in inert limits, and, *à fortiori*, in the living body, would be below 44° cent. (111.2 Fahr.).

*Ferrocyanide of Potassium.*—M. Regnault read, in his own and M. Hayem's names, a clinical study on ferrocyanide of potassium. The results of their experiments and observations, carried out with the greatest care, and in relatively simple conditions, showed that ferrocyanide of potassium is inactive as a ferruginous medicine, and does not contribute to the regeneration of the coloured elements of the blood. The organo-metallic radical does not become modified in the animal body, while the iron remains inert; the elements of cyanogen also remain absolutely inoffensive, since it is possible, without any disturbance of the general health, to administer it for weeks and months in daily doses of several grammes. Several experiments proved that, in doses of from two to six grammes, the ferrocyanide of potassium does not exert any influence over diuresis, nor on the production of urea.

*Dressing of Wounds.*—M. Lefort continued his paper on the dressing of wounds (see LONDON MEDICAL RECORD, April 15, page 181). He again insisted on the insufficiency of the theory of germ-ferments to explain clinical facts. He declined to admit that the principle which caused infection of the blood in primary purulent infection was of external origin. Primary purulent infection had, on the contrary, its origin in the general condition—the constitution, diatheses, food, etc. The causes of erysipelas also would be found in certain constitutions of dressing, and not in germ-ferments. This developed, these two great complications of wounds might show themselves with such frequency and intensity, that the title of epidemic was given to that condition. If erysipelas and purulent infection were epidemic, it was because they were contagious. A decided contagionist, M. Lefort, after having taken the precautions to prevent the primary development of these affections, laid stress on the precautions to be taken so as not to communicate them to other surgical patients. In connection with this object, he advocated what he called continuous bathing, which consisted in irrigating the wounds with water containing an alcoholic solution of camphor. This method had yielded the most satisfactory results, and he communicated the statistics of his operations, not only in private practice both in town and in country, but also in the hospitals.

March 20. *Dressing of Wounds.*—M. Jules Guérin analysed and discussed the opinions enunciated by the preceding speakers, and specially those of M.M. Trélat and Lefort. With the last mentioned gentleman he was a partisan of union by first intention, but he desired that it should be more complete; and after having referred to his labours before the present debate on this subject (the subcutaneous method, dressing by occlusion, continuous aspiration, and pneumatic occlusion), he showed how the dressing of wounds by pneumatic occlusion, at which he had thus progressively arrived, allows him to come nearer and nearer to the proposed end, and to pre-

vent suppuration, ensure union, and to prevent the putrefaction of liquids, were the indications to be fulfilled in immediate union. The means which contributed to the success of this method might be referred to five principal heads. 1. The mode of formation of the flaps; the unequal double flap and the single flap methods alone allowed immediate and permanent coaptation of the surfaces. 2. The coaptation and grafting of the surfaces; ordinary sections made, in a more or less parallel direction to the fibres of the flaps, and with a sharp knife, left at certain points small muscular sheaths, not completely opened; if the saw-knife were used, the whole surface of the flaps was like shagreen, and presented for coaptation and junction at the corresponding points the common plaster lymph which will unite them. 3. The pressure adapted to favour coaptation and grafting—pads, wadding, and bandages, compressed in an unequal and insufficient manner, whence resulted an irregularity of distribution of the plastic fluids, and local stagnation of useless or injurious liquids; pressure obtained by pneumatic occlusion gave far better results. 4. The constant guarding of the wound from contact with the air. 5. The constant removal of the gases and liquids excreted by the wound. These two latter conditions were perfectly realised by pneumatic occlusion. In addition, in order to assist the evacuation of the gases and liquids, M. J. Guérin replaced the India-rubber drainage tubes by small incompressible tubes, pierced at the ends. Finally, pneumatic treatment had likewise the effect of inducing and accelerating granulation of the surfaces.

April 2. *Complex Atresia of the Female Genital Organs.*—M. Bernutz read a memoir by M. Puech. It comprised a study of a malformation which, as it were, divided the uterus into two independent cavities, of which the one, as a consequence of impermeability of its excretory duct, became the seat of an accumulation of menstrual secretion; whilst the other half of the uterus, being pervious, allowed the discharge to escape. This anomaly was the outcome of a double arrest, supervening from the eighth to the twelfth week of foetal life, in the organisation of the lower portion of Müller's ducts, which should, by metamorphosis, constitute the largest portion of the vagina. M. Puech studied these arrests of development, their varieties and consequences, which resulted from them after the establishment of menstruation. The symptoms of these affections were described with great care, and the author specially insisted on the differential diagnosis.

## ACADEMY OF SCIENCES OF PARIS.

March 18. *Parasites.*—M. A. Horwarth read a note on the formation of virulent parasites. The experiments that he had made showed that organisms could only be produced whilst the media in which they are formed were at rest. Tubes containing bacteria, and kept in continued agitation, showed no increase of these organisms.

*Interstitial Fibromata.*—M. Abeille read a paper on interstitial fibromata of the uterus. He established the following points. 1, The prognosis of these tumours is of a very serious character. 2, They must be operated upon by the usual methods. 3, Hysterotomy by the actual cautery is the most successful proceeding.

*Charbon.*—M. Toussaint read the following note on



the parasitic nature of charbon.—In the communication made by me to the Academy on Dec. 3<sup>rd</sup> (see LONDON MEDICAL RECORD for Jan. 15), I showed the mechanism of death consecutive on the inoculation of charbon into the rabbit. It dies in consequence of the obliteration of the capillaries of the essential organs, such as the brain and lungs. The majority of the capillaries of the animal economy are full of bacteria at the time of death. I would point out the choroid and the retina of the white rabbit, as being among the points where the obliterations are most easily observed. The choroid plexuses of the lateral ventricles, and the blood-capillaries of the lymphatic glands, and the connective tissue, should also be ranked in the first order for the same purpose. Notwithstanding the proofs of the parasitic nature of charbon, and those furnished by MM. Koch and Pasteur, some experimenters still believe in the existence of an anthracoid virus; I therefore think it to be useful to draw attention to the following experiments, which appear to me to bring forward irrefutable arguments in favour of the parasitic doctrine. 1. I have demonstrated that, when fresh anthracoid blood is collected into tubes where it is preserved from contact with the air and from putrefaction, this blood loses its contagious properties in seven or eight days, sooner even if the blood be kept up to a temperature of from 38° to 40° cent. (100°·4 to 104° Fahr.). Viruses do not usually behave in this way. This means is, on the contrary, one of those used to preserve them. 2. Filtration of fresh defibrinised anthracoid blood made through a filter composed of eight sheets of paper is sufficient to deprive the blood of its contagious elements; the filter allows the granules, and even some white corpuscles, to pass through it, but retains all the bacteria. This method is preferable to filtration through plaster, which only allows substances dissolved in serum to pass through, and not any figurate elements. M. Chauveau has demonstrated that the contagious properties belong exclusively to the figurate particles of the virulent fluid. In his experiments, filtration, performed in the manner I have employed for charbon, allows a large part of the anthracoid elements to pass through. Applied to the anthracoid blood, it completely deprives it of its contagious properties. 3. In the case of injection, or, if it be wished, direct transfusion from vessel to vessel, made from one animal to another of the same species, one can at pleasure diminish the interval of time between the moment of injection from that of death, and suppress the so-called period of incubation. Experiments prove that death is due to the multiplication of bacteria. By keeping account of the quantity of bacteria injected, of the duration of the disease, of the quantity of blood in the subjects, and of the approximate number of bacteria existing at the moment of death, it can be established that the multiplication of the parasites takes place in geometrical progression, which commences immediately on their introduction into the sanguineous system.

March 25. *Treatment of Wounds by Occlusion.*—M. Félix Ravaisson-Mollien said that the paper read to the Academy of Sciences on March 11, recalled to his mind an observation made by him some years ago. In the winter of 1869, after a sudden transition from the climate of Besançon to that of Nice, suffering from deep chaps of the hands, and having successfully tried the usual remedy, he closed the chaps with a layer of collodion; but as the collodion above the cavities formed by the small gaping wounds was

torn open easily, he closed the wounds by threads of wadding, just as in caulking the seams of a vessel with oakum, and then covered up the chaps thus filled in with collodion. The inflammation was stopped almost immediately, and in a few days the cure was complete.

*Chloral and Chloroform.*—M. Husson read a note on the essence of mint, which seemed to him adapted to detect impurities or changes in chloroform and hydrate of chloral.

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## REVIEWS.

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*The Cure of Rupture, Reducible and Irreducible; also of Varicocele and Hydrocele; by New Methods.*  
By GEORGE HEATON, M.D. Boston, 1877.

If the first portion of this small work claim to be merely a brief digest of the views generally held as to the pathological nature and frequency of abdominal herniæ, it leaves little to be desired, though it adds nothing to the knowledge of those familiar with the ordinary literature of the subject. As such, it is terse and fully intelligible. But if, as we would gather from some expressions in the text, it profess to be a complete essay on the subject, it appears to us to lack precision and adequacy of description.

In the second portion, the New Method for the cure of herniæ is brought under our notice. But, though new in the sense of only having been recently brought formally before our profession in a special work devoted to its advocacy, it is one which has been adopted by the author, Dr. Heaton, for the past thirty years, and to the perfecting of which he appears to have given much patient thought. It cannot, therefore, be any hasty conclusion that he has formed, that in its results it is more to be relied on than the operations of Gerdy, Wutzer, and Wood, although many surgeons will not fully accede to his rather sweeping assertion that these latter operations are now generally discarded. And, if it be found that the experience of other surgeons in the employment of this new method confirms the conclusions arrived at by Dr. Heaton as to its adequacy for the permanent cure of ruptures, it will come to be regarded as one of the most valuable steps recently made in surgery.

After a careful study of the whole work, the following appear to us to be the main features of what Dr. Heaton calls the method of "tendinous irritation" for the cure of herniæ.

The author states as his experience, that, if sufficient plastic effusion be produced by suitable irritants in the fibrous tissue around the tendinous openings by which herniæ escape from the abdomen, sufficient namely to cause a certain amount of agglutination without suppuration, or the formation of abundant lymph, these openings will tend after a time to contract more and more, and eventually to a sufficient degree to prevent the returned herniæ from again descending. Space will not permit us to review the pathological grounds upon which he explains the results of his experiments. It will suffice to say that they appear sound, and agreeable to the most modern doctrines of pathological histology.

The mode in which this irritation of the fibrous structures is accomplished in a case, for instance, of reducible oblique inguinal hernia, is briefly as follows. The gut and sac, if possible, being reduced, the tip of the left forefinger is invaginated within the skin

into the inguinal canal. A small hollow needle with a syringe is then pushed through the skin and external ring, into the canal, until its eye is near the internal ring. A few drops of a carefully prepared solution of extract of quercus alba are then forced out by the syringe into the fibrous structures over the whole length of the canal; externally to the neck of the sac, if the latter be irreducible, as the needle-point is made to traverse this on its way out. On removing the needle, a pad is carefully adjusted over the canal and secured by a firm bandage. The patient is from this moment obliged to lie absolutely supine for about ten days or so, when he is allowed to sit up and soon after to get about, still, however, wearing the bandage and pad. In a few weeks this too may be left off, when it will be found in suitable cases that the herniæ no longer descends, and is cured. This cure is found permanent.

This is a rough sketch of the method of procedure; but there are a number of details necessary to be observed, and no doubt absolutely essential to the success of the treatment which we are unable to allude to here. The exact strength of the solution, the form of syringe, and the manner of manipulating the point of the latter within the canal, are some of them. Rules, too, have to be observed in the choice of suitable cases and in the management of the sac before operation in the several varieties of hernia; for to each of the commoner kinds this method may be applied in proper cases. All these points are carefully dealt with, and minute directions are given and explained for the treatment of cases from beginning to end. This method, for which the author claims a very large proportion of successes in several hundred cases operated on in the course of thirty years has, at least, the merit of simplicity and safety—no death or gravely untoward result having ever occurred in his hands from its employment. It requires the greatest patience, however, both on the patient's and surgeon's part, and the latter must be able to watch his case occasionally often for several months.

The next section of the work is devoted to the author's modes of curing *irreducible* hernia. Briefly stated, these consist in breaking down, wherever possible, by free and repeated manipulation, the adhesions within the sac, which prevent reduction; and, secondly, if this be impossible, by cutting down, and opening the sac, and then dividing the adhesions until the hernia can be returned; after which the radical cure, as already described, is applicable and usually successful, although not always necessary. For the manner in which manipulation is to be performed he gives minute directions; and one is surprised at the success which he appears to have thus attained. But our surprise is increased when we read of the impunity with which in the author's hands the sacs of herniæ have been freely opened, adhesions cut through, and large portions of omentum removed by the knife. The author has never had a fatal result in a large number of cases. And in twenty-nine recorded in the work before us where each of these two methods was employed, the results in regard to permanent cure have been very remarkable, and no untoward occurrences have been experienced. All this suggests to us two questions: first, whether this total absence of bad results in all Dr. Heaton's cases where he has freely opened the sac and removed large portions of omentum, or cut through adhesions, is entirely due, as the author seems to think, to the fact that the operations were performed upon healthy people in whom there was

at the time no trace of inflammation in the sac, unlike the ordinary conditions under which the latter is opened for strangulation: second, whether these results may not be in some part due to the influences of climate, etc., on the safety of operation, just as lithotomy in India and Australia is very free of risk; a fact for which we know no other explanation than that there is something in the climate which favours rapid recovery.

When in this way the herniæ are reduced into the abdomen, and the patient's wound after removal of the omentum has healed, it is frequently found that no further treatment is required, the rupture being cured at the same time, and requiring no truss. Such individuals are able to walk about as well as though never affected with hernia.

Of Dr. Heaton's method for the cure of varicocele, nothing special need be said. It is only the more careful carrying out of an operation often practised by surgeons in this country; namely, simple subcutaneous ligation of the veins with fine silver wire. He leaves the fine wires to take care of themselves.

The method of radically treating hydrocele, which he likewise describes, is also well known and often adopted, namely, introducing red precipitate into the tunica vaginalis after evacuation of the fluid.

The following remarks from Sir William Fergusson's *System of Surgery*, in reference to a case radically cured by Dr. Heaton, may be appropriately cited here. It is the second case, in the appendix of the work before us. The patient is stated there to have applied in vain to the most celebrated physicians in London and Paris for relief before being successfully operated on in America by Dr. Heaton. This patient was afterwards seen by Sir William Fergusson, who says: "Some years ago, I saw in London a gentleman of high standing and character in the United States, who had been radically cured of a reducible crural hernia. I afterwards met the surgeon who professed to practice this method of treatment, and was promised the knowledge of it, provided I permitted reference to my name and bound myself to secrecy. I declined such a compact, but offered every other facility which, either King's College Hospital, or my own position, could command. These proposals were not complied with, and I should scarcely have considered myself justified in such a work as this in taking notice of a professional matter of such importance, had I not been impressed with the idea that the surgeon in question was strictly honest, though imbued with an erroneous idea of the ordinary professional character in this country." ARTHUR E. BARKER.

*Brain: a Journal of Neurology.* Edited by Drs. BUCKNILL, CRICHTON BROWNE, FERRIER, and HUGHLINGS JACKSON. London: Macmillan and Co. 1878.

We have to welcome this month the first number of a new journal, which appears to fill up a gap in medical literature which lay conspicuously open. "On the Continent, and in America, there are many journals which treat specially of diseases of the nervous system, but in this country there are none which include in their scope all that relates to its anatomy, physiology, pathology, and therapeutics." So says the preface to the new journal, and in these remarks we heartily agree.

That the journal is destined to take a prominent place in medical literature is self evident. The world-



wide reputation of its four editors (Drs. Bucknill, Crichton Browne, Ferrier, and Hughlings Jackson), and the very strong staff of contributors, whose names are appended to this first number, are a sufficient guarantee that much excellent and varied work will be contributed to our present knowledge of cerebral pathology.

The journal opens with an able paper by Mr. Jonathan Hutchinson, on the symptoms significant of different states of the pupil, from which many valuable and practical hints in ophthalmology may be obtained.

"In examining the pupil", says Mr. Hutchinson, "we concern ourselves chiefly with (1) its shape; (2) its size; (3) its activity; and (4) with any differences in any of these respects which may be observed between the two eyes". The pupil, normally round in the human subject, becomes oval in glaucoma, and may also appear fixed when bound down by an old iritis.

Mr. Hutchinson's method of measuring the pupil is at once simple and ingenious. He employs as a pupilometer a perforated plate, such as is used to measure bougies. He finds that the adult pupil in good daylight corresponds with hole No. 4, when the plate is laid on the cheek of the patient. The pupils, however, of children and young persons are normally larger than those of adults, and in senile periods still further diminution takes place. Allowing for personal peculiarities, the size of the pupils corresponds with the patient's nerve-tone in many cases. If the tone be low the pupils are large; and no condition of defective tone is more certainly revealed than that which results from sexual irregularities in early life.

In estimating activity, each eye should be examined separately. The observer will find great advantage in wearing, for the moment, spectacles of + 10. The activity of the pupils, speaking generally, diminishes with age, and is greatest in the young and vigorous.

When a pupil which is itself sluggish, on direct exposure, responds immediately when the other eye is exposed, we may infer, 1st, that the irido-motor apparatus is sound; 2nd, that the percipient structures in the second eye are sound; and 3rd, that there is some defect in the percipient structures in the first eye.

On the other hand, there are cases in which an eye which can see perfectly, and enjoys good use of accommodation, yet has a pupil which does not act in the least on alternate shading and exposure of its fellow. In these cases the demonstration is clear that there is some interference with the integrity of the motor nerves. The absence of "cycloplegia" leads again to the suggestion of disease in the vasomotor. If, in addition to this absence of iridal susceptibility to influence from the other eye, we have also failure of accommodation, then the triad of symptoms is complete, and we must suspect the lenticular ganglion itself.

As to differences between the pupils, it is necessary to guard against erroneous inferences by remembering that precise symmetry of pupils as to size is exceptional rather than the rule.

Mr. Hutchinson next explains certain terms used in ophthalmology. By the term mydriasis, we denote a state of great dilatation of the pupil. The term myosis is the opposite of mydriasis, and is applied to any condition of unusual smallness of the pupil. Iridoplegia is a term applicable wherever both circular and radiating fibres of the iris are para-

lysed, and the pupil fails visibly to respond to the stimulus of light. In iridoplegia we have united the conditions which, when present singly, constitute respectively paralytic myosis and paralytic mydriasis. Cycloplegia is due to paralytic failure of the ciliary muscle, and is attended by absolute loss of the function of accommodation. Ophthalmoplegia interna is a term which Mr. Hutchinson has recently proposed to denote the condition in which both circular and radiating fibres of the iris, and also the ciliary muscle, are all simultaneously paralysed. Here we have entire cessation of muscular action within the eye. It is necessary to use the word interna, because there is an important group of cases of simultaneous paralysis of all the external ocular muscles, for which the name ophthalmoplegia externa is wanted.

Mr. Hutchinson concludes his paper by a really original and interesting remark upon the functions of the ciliary ganglion. "What", says he, "would be the result of extirpation of this ganglion, or of its complete destruction by disease? Manifestly, we should expect an entire paralysis of the internal muscles of the eye—the dilator of the pupil, the constrictor of the pupil, and the ciliary muscle. The pupil would remain absolutely motionless, and the patient be unable to read without glasses." Such cases occur, and to them Mr. Hutchinson proposes to apply the term ophthalmoplegia interna. They are usually in connection with syphilis, and often both eyes suffer together.

Here, then, we have a theory of the possible occurrence of pupils sluggish to the extent of absolute immobility without central disease, and in consequence solely of disorganisation of a little peripheral ganglion. Nothing in respect to it has as yet been proved by *post mortem* examination; but the suggestion is of much interest for the student of cerebral pathology, since pupils in this condition might easily excite suspicion of more deeply placed disease.

Although the diagnosis of ophthalmoplegia interna may be made with most confidence when it occurs without complication, yet we must remember that it is very possibly present, and in connection with the same lesion in many complicated cases. Whenever the pupil is motionless and the accommodation lost, the lenticular ganglion should be suspected, even although there may be clear evidence of disease in other, and perhaps in distant, parts.

H. SUTHERLAND, M.D.

## MEDICAL CORRESPONDENCE.

### PARIS.

*Dr. Sée on New Remedies: The Dressing of Wounds: A Criticism of French Surgery and Medicine.*

An American physician in Paris writes to us:

The Academy sittings have been recently *attristés*, according to the phrase of M. Pidoux, by some curious exhibitions. Dr. Sée has determined to make for himself a reputation as a "*guérisseur*" of diseases commonly called troublesome. He has put forward two remedies which have no novelty elsewhere, but which he seems to think new here, and has announced them with a *fanfare* which has reached the public through the daily papers, and with a pretension of infallibility which has painfully affected some of his learned colleagues:—salicylate of soda for rheumatism, and iodide of potassium for asthma. Every-

where else there is probably no third year's student who does not know what M. Sée has put forward here as academic novelties. But this time he has presumed too much on the academic "insularity" of his learned colleagues. The little escapade with salicylate of soda passed unbuked, for it was only the commonplace knowledge of Germany, England, and America which was solemnly reproduced as a novelty; but iodide of potassium had been put in its proper place by M. Trousseau as a remedy for asthma. M. Sée has therefore been seriously taken to task.

The most comical incident in that always rather humorous body, the Academy of Medicine, has been the long discussion of the treatment of wounds. The fearful mortality of wounds in the Paris hospitals has for the last twenty years made the surgical wards of the French hospitals, which were once the admiration of Europe, the bye-word and reproach not only of Europe but of both hemispheres. The scorn of American students who have become accustomed to the British and American cleanliness and antiseptic success, fully equals the indignation with which other European students accustomed to Lister's, Volkmann's, and Bardeleben's results, walk through the wards of a French hospital and see case after case suppurating and stinking. The foul abscesses, the pyæmia, the exhausting discharges, the slow retarded union of cut surfaces, the stinking masses of charpie stuck between the wounds, the cruel and oft-repeated cauterisations, the frequency of diffuse cellular inflammation, the rarity of primary union, are all characteristics of French surgical wards, and separate them by an abyss from those of the rest of the civilised world. It is indeed not too much to say that, for bad nursing, bad dressing, dirty wounds, frequent purulent infection, and bad vital results, the Parisian hospitals are matchless in either hemisphere, except, perhaps, in the hospitals of Spain and South America, which alone stole their inspiration from Paris. All this is perfectly known to some of the younger surgeons here who are beginning to travel, and who read other than merely French books, who know that primary union is not in any other country than France the "futile dream" which it was supposed to be by the old gentlemen who represent French surgery in the Académie de Médecine, but the ordinary and most frequent result of every-day surgery. They must desire that foreign surgeons will see or hear but little of the recent discussion which we have had here on the treatment of wounds.

There is no hospital registration here; so that the misdeeds of the surgeons do not confront them in figures, and every one is free to persuade himself and to preach to others of the good results of his "system"; and there are as many "systems" as surgeons. What the results are, may, however, be surmised by anyone who does not know the painful and disgraceful facts, from the mere fact that surgeons generally admitted that "union by primary intention" ought not to be attempted! And having comfortably settled that the now everyday achievement of the youngest surgeon of every other country in the immense majority of cases was beyond their attainment, the surgical sages proceeded to recommend every one his own system. Old M. Gosselin pronounced antiseptic dressings a delusion; old M. J. Guérin recommended pneumatic occlusion; M. A. Guérin, cotton-wool dressings (capable of being used with excellent effect, but much inferior to ordinary antiseptic dressings); M. Verneuil, open-air dressings (but modified by "Lister"); M. Lefort, a

"mixed system". The fact is, that any one who visits the wards of some of these gentlemen will very soon understand why they think antiseptics a delusion, or primary union an utopian dream. The primary notions of surgical cleanliness are wanting both to surgeons, house-surgeons, dressers, and nurses. Nothing is clean: neither the hands nor the dress, nor the instruments, nor the dressings, nor the air, nor the bed or bedding. The nursing is for the most part (with some individually brilliant exceptions) a mere name; the religious sisterhoods "administer" without really nursing the patients; and really good hospital nursing, as it is understood in London and in New York, does not exist. The sisters spend a relatively small time in the wards; they are not trained; they are insubordinate; they are technically unskilled; they waste hours daily *en retraite*; they do few dressings, leaving everything to the ignorant and venal *infirmiers*. It is notorious that a patient gets little attention, except by bribery, and then he obtains privileges which often ought to be withheld. Night-nursing is merely nominal. There is need here of a great reform. The despondent and medieval view of the treatment of wounds taken in the late debate at the Académie is explained as much by the badness of the nursing and dressing, as by the old-world and obstructive practices which are known here as "French surgery". The first thing the French surgeons have to learn is "cleanliness":—cleanliness in their own manipulations; isolation (in the individual sense of the word) of the wounds; cleanliness of their instruments; cleanliness of the dressings. They have then to teach the same lesson to their house-surgeon, whose neglect, dirt, and cruel habit of carrying infection from patient to patient are so engrained that nothing short of a great effort can alter them. A complete reformation also is wanted in the dirty, slovenly ways of the good sisters, by whom water is treated as an occasional luxury, and cleanliness as a superficial question of caps, collars, and pillow-cases. I should like to turn a small army of our Bellevue nurses and students into the new Hôtel Dieu, and I would undertake to say that in six months we would show such a record as would astonish those old gentlemen who prate about the treatment of wounds as if it were a medieval mystery, when all a wound wants is TO BE KEPT CLEAN (please put that in capitals in case you have any French readers) and not to be poisoned and infected by dirty instruments and infected fingers, and filthy probes that have never been plunged in hot water, and dressings of suspicious origin. In every other country in the world every surgical instrument, probe, or forceps is plunged into boiling water immediately after use; here (*horresco referens*) it is wiped on the apron. *Ex uno disce omnes*. Neglect of cleanliness—that is the secret of the bad results of French surgery; and how bad they are as compared with the results of the rest of the world will never be known; for, ostrich-like, no reliable statistical records are kept. It is so pitiful to see what I see here, that I do hope you will print what I am writing; it may raise discussion, and, if so, must do good. A capital operation in some of the services here is little short of homicide. I know of one hospital where the last seven operations have all proved fatal; three with pyæmia, one with multiple secondary abscesses, one with erysipelas, two from exhaustion. I think that in Mr. Lister's hands, or in Mr. Bardeleben's, or in any of our great American hospitals, certainly five would have recovered without a bad symptom, and I believe all would. The first five were simply



poisoned from hospital infection with dirty instruments and dressings, and fingers constantly meddling with the wounds. We think of starting a Foreign Student's Society here, and reading papers on our hospital experience. If the idea should be carried out, some rather curious revelations would result; but none of the French papers would, I expect, dare to publish. We do not undervalue the knowledge or the careful training of the surgeons, but they have little or no knowledge of the improvements of the last twenty years. They know nothing of our American system of treating fractures by suspension and extension by weight, which is adopted all over the world. They know nothing of subcutaneous section of bones, as practised by American surgeons. The gynæcological teaching and clinical departments are beneath contempt; there is next to no gynæcological or obstetrical teaching. The ophthalmic surgery is ostentatiously given over to men who have distinguished themselves chiefly in every other department of surgery, but know only what every one else knows of ophthalmology.

The surgeons and practitioners, too, do not love each other over much; and one practice is spoken of as prevailing in very high quarters, which really seems inconceivable; but I am assured on very good authority that many of the best men yield to it, and their names have been given to me, and the circumstances related with great detail. It is the practice of consultants to charge very high fees for their consultation or operation, and hand over part of it, sometimes half of it, to the practitioner who calls the consultation. Two or three highly placed hospital men are mentioned who make this their rule, and one at least whose name surprised me, for I regarded him as quite of the *haute volée* of science. Large sums are thus handed over, but these gentlemen find it to their interest to do so. As there are many practitioners who make it a rule always to call them in, in order to share the plunder, foreign patients should be particularly on their guard against a practice which puts them up to the highest bidder, and makes them suffer possibly in health as well as in pocket by the cupidity of their medical attendants.

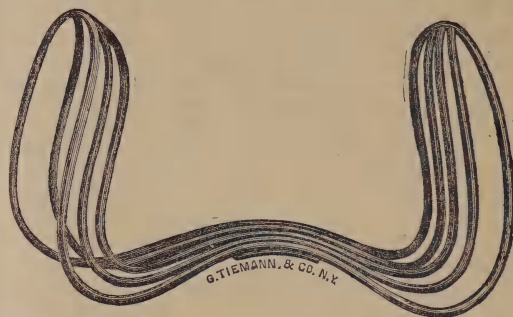
I believe such a practice is unknown anywhere else in the world; and I should have hesitated to believe in its existence or to mention it, but that I am assured on the authority of more than one person who cannot fail to be well-informed, that the practice exists very largely, and has extended to very high quarters.

Once more let me say, that I have been here long enough to feel great admiration and friendship for my French colleagues, and especially to admire the steadfast energy with which the younger men are at work to restore the greatness of the French school of medicine, in which they will surely succeed. Meantime, there are many abuses which have eaten into the heart of the system, and there are many abuses and much inaptitude, nepotism, and corruption in high places. By some this is set down to Imperialism, by others to priestcraft, etc.; it is probable that a variety of such causes have been at work, but chief among them is the prevailing vice of *egotism*, which has for twenty years been the great enemy of scientific progress here. But things are mending.

## NEW INVENTIONS.

### A MODIFIED SIMS'S SPECULUM.

Dr. Blencowe E. Fryer, Surgeon in the United States Army, describes and figures in the *New York Medical Record* a modification of Dr. Sims's speculum, constructed in order to enable the director to obtain at a glance a view of all the surface of the mucous membrane; and this is impossible with the



solid instrument of Sims. The speculum is constructed of four or more wires, each wire one-eighth of an inch in diameter, silver or nickel-plated, preserving in every respect the outline of the Sims speculum. Messrs. Tiemann and Co. of New York, have made such a speculum of wire, and it has been found exceedingly convenient. The accompanying woodcut shows very well the construction of the instrument.

With this instrument a complete view of all the parts in rectal examination can be obtained at once, while, to get such a view with the solid speculum of Sims, it is necessary (from the fact that the portion of the mucous membrane covered by the instrument is of course hidden from the eye) to glide it one half at least of its width either way. In vaginal cases, too, the complete view at once of all the mucous membrane is at times required, and it is the more difficult as compared with rectal examination.

It may be objected, and reasonably, that with his modification there is a loss of light, from having less of the reflecting surface in the instrument; but Dr. Fryer has not found this difference very material.

It is not intended to suggest the wire instrument as a substitute for the solid speculum of Sims, but only as an addition to it, and mainly for vaginal and rectal cases, where a complete view of the whole lining membrane, and more especially of the posterior portions, is desired to be had at once.

### NEW MEDICINAL PREPARATIONS.

Messrs. Ferris, Boorne, and Co., of Bristol, have forwarded us four novel preparations, which we have submitted to trial, and with the following results.

1. *Anodyne Amyl-Colloid*. It is prepared with hydride of amyl, holding in solution aconitia and veratria, and combined with ætherial collodion. We have tried it in neuralgia and muscular pains with marked benefit. The amyl rapidly volatilizes, leaving a collodion film on the skin. The intensity of the action of the alkaloids may be increased by the subsequent application of spongio-piline, moistened with warm water.

2. *Dialysed Iron*. This is a very elegant and

useful preparation of iron—dose ten to twenty drops. It is devoid of styptic taste, and may be readily taken by children, especially if mixed with glycerine. It has been administered by us in cases of strumous ophthalmia in this form with marked benefit. We can therefore confidently recommend this preparation to the notice of the profession.

3. *Liquor Cinchona Dulcis*. This is a very elegant and agreeable preparation of cinchona, and as such will be readily taken by children, to whom our sample has been entirely limited. The dose is from half to one drachm three times a day. In the cases in which it has been tried, we have found an increase of vital power speedily follow its exhibition.

4. *Liquor Arsenici Bromati*. This preparation has been recommended for use in cases of disease of the nervous system and in epilepsy. In connection with its use, an almost exclusively meat-diet is advised. The dose is one to two minims once or twice a day. It is asserted that it is superior to Fowler's solution in the treatment of cutaneous disease. In the cases of these affections under our observation, in which it has been tried in combination with cinchona or with bitters, we have found very good results. We propose to test its efficacy on a large scale in the treatment of epilepsy, and will hereafter publish the results.

### MISCELLANY.

Dr. BROWN-SÉQUARD has been recommended by the Professors of the Faculty of Medicine in Paris as successor to M. Claude Bernard in the Chair of Physiology. As, however, he is a British subject (a native of Mauritius) his naturalisation in France is a necessary preliminary to his holding the Professorship.

FOREIGN UNIVERSITIES.—Dr. Gussenbauer, of Liège, has been nominated Professor of Surgery in the University of Prague, in the room of the late Dr. Heine.—Dr. Bergmann, of Dorpat, is nominated Professor of Surgery in Würzburg, in succession to the late Dr. Linhart.—Dr. Bose, of Berlin, is nominated Professor of Surgery in the University of Giessen, in the place of Dr. Wernher.

A DUTCH LADY-DOCTOR.—The degree of Doctor of Medicine of the University of Amsterdam has been obtained by Mademoiselle Aletha Jakobs.

CARTER *v.* LIEBREICH.—We (*Ohio Clinic*) have known for a good many years that astigmatism was at the bottom of a goodly number of difficulties, some apparently of the brain, such as agoraphobia, etc.; but that it should ever lead to such a mental state by its mere study as we find was Mr. Carter's, on page 489, American edition, of his work on the eye, had never been dreamed of in "our philosophy". He says: "Mr. Liebreich's lecture at the Royal Institution, in which he attributed the peculiarities of some of Turner's pictures to the astigmatism of the artist, was neither more nor less than an elaborate hoax." He thinks that the effects Mr. Liebreich produced on canvas by the magic lantern "would have been produced on Turner's retina, and might possibly have been transferred to his canvas, if his corneæ had been placed upon antennæ, and thus worn, so to speak, two or three inches in front of his eyes, but in no other contrivable manner. The most curious result of the whimsical experiment thus made upon the public credulity was the discovery that a large proportion of the audience appeared to believe that the learned lecturer was in earnest." If anyone will take the pains to refer to *Macmillan's Magazine*, April 1872, page 499, *et seq.*, it will be seen that Mr. Liebreich simply offered a scientific explanation of Turner's "peculiarity" late in life, in opposition to the generally accepted view that it was the result of a "deranged intellect". The same explanation

was made of Mulready. His paintings late in life were too purple; he added too much blue. Mr. Liebreich showed that by looking through a glass with about as much of the yellow tinge as is found in the pale sherry the defect was corrected. In a word, these defects arose from the changes normally occurring in the lens of the eye in advancing years (assuming a yellow colour); and, advancing in the case of Turner into a pathological state, so he no longer saw distinctly. In the case of Turner it was a matter of dispersion of light, in Mulready's the yellow colouration of the lens. Now, as a matter of fact, Mr. Liebreich, in the lecture as quoted, does not use "astigmatism" in connection with either of the two above painters. No doubt almost everyone has met in his practice with artists who have applied for assistance. Up to a certain period they (as in at least two cases) had been able to overcome both their hypermetropia and astigmatism, when they began to experience fatigue, and, what was still worse, their friends would complain that their drawing was bad, distorted, and that their colours were not correct, were "mixed". One case, that of a "Sister" in a prominent Catholic Seminary, came to the writer in great distress on account of the above symptoms. After correcting her optical defects (the hypermetropia and astigmatism) some of her late work appeared really ludicrous to her.

THE CAPTURE OF THE MEDICAL OUTPOSTS BY THE LADIES.—Under this head the *Philadelphia Medical Reporter* writes: "One of the more remarkable events in the medical history of the past year has been the steady advance in medical science and practice by the fair sex. The examinations which they have passed in Paris, Switzerland, and several of the English schools, are spoken of as fully as severe as those of their male associates, and, as a rule, even better withstood. The Boylston prize essay in this country was given to a woman, although the sex of the author was necessarily unknown to the critics who awarded the prize. In fact, it looks as if the male sex had better look to its laurels, or they may find themselves shelved some fine day, and recommended to stick to avocations requiring less brain power and energy than those for which nature has fitted the fairer half of the species." After recounting the advances made in all countries in the medical knowledge of women, it adds: "As we have the fullest confidence that the influence of intelligent and pure women is always and everywhere for good, we contemplate with satisfaction these measures, and trust that no country will be churlish and short-sighted enough to oppose such measures."

THE LAW OF INSANITY.—Dr. Bucknill, F.R.S., in the first of the three Lumleian lectures at the Royal College of Physicians, on Insanity in its Legal Relations, pointed out that no medical man could avoid the responsibility of giving evidence both as to fact and opinion. He defined the limits of this duty as the diagnosis of some particular man's state at a definite time, and he warned his professional brethren against transgressing this limit by any consideration of penal consequences to the prisoner. A recent medical authority declares, "abolish capital punishment and the dispute between lawyers and doctors ceases to be of practical importance"; but a physician maintaining such a position might be compelled to admit in the witness-box the proposition that, if you intend to punish the prisoner in a certain manner, he is irresponsible; but if you will punish him in a certain other manner, then he is responsible. The lecturer pointed out that the limits of insanity in its medical meaning had been greatly extended of late years, as was proved by comparing old and recent medical literature. In the lectures delivered at the College in 1822 by Dr. Willis, the whole subject of insanity was considered under two heads—the high state and the low state; whereas now some classifications of insanity comprised forty different kinds, embracing conditions of mind which it was impossible that the legal authorities could deem irresponsible. On the other hand, the law of insanity had been stereotyped by the statement of the Judges to the House of Lords in *M'Naughten's case*, ■



rubric of the Common Law which impeded the amelioration that must otherwise have followed upon the progress of knowledge. He proved, by quotations from the evidence of Lord Justice Blackburn before the select committee on the Homicide Bill, and from the memorandum of the Lord Chief Justice of England to the same committee, and from other authorities, how little contentment there was in the legal mind with the law of insanity as it exists. He dwelt especially upon that most important declaration in which the Lord Chief Justice expressed his most cordial concurrence in Sir Fitzjames Stephen's proposed alteration of the law, by which a new element of irresponsibility would be introduced—namely, the absence of the power of self-control caused by disease affecting the mind. The lecturer argued that this element of irresponsibility was virtually the only one needed, swallowing up all others like Aaron's rod; because ignorance of the nature of the act, or ignorance that it was wrong, or delusion itself, were all bound to the conduct by that loss of self-control which is the result of these mental states. He then passed in review the defective practice of the courts in deciding upon a prisoner's state of mind without causing any real inquiry to be made thereupon, and he suggested, as a workable amendment which would greatly lessen the possibility of condemning an irresponsible offender, that a solicitor should be granted to defend any indigent homicide supposed to be insane, with power to procure evidence and engage counsel. He expressed his conviction that the change in the principle of the law, which would satisfy scientific requirements and which had been urged upon the legislature by some of the most trusted chiefs of the law, could not be long delayed.

**THE GOVERNMENT RESEARCH FUND.**—Among the grants to be paid from the Government Fund of £4,000, on the recommendation of the Royal Society, were the following: Dr. W. A. Brailey, for Researches on the Causes determining the Tension of the Globe of the Eye in Man and Animals, and the Physiological Influence on the Tension of Atropia, Daturin, Eserin, Pilocarpin, etc., £25; Mr. E. A. Schäfer, for Payment of an Assistant in Continuing his Histological and Embryological Investigations, £50; Dr. C. R. A. Wright, for Continuation of Researches on Certain Points in Chemical Dynamics, etc., £100; Professor W. K. Parker, Aid in Continuance of Researches on the Morphology of the Vertebrate Skeleton, and the Relations of the Nervous to the Skeletal Structures, £300; Professor A. H. Garrod, Aid towards Publication of the Second Fasciculus of an Exhaustive Treatise on the Anatomy of Birds, £100.

**QUID SPECULUM POSSIT.**—One of our most skilful practitioners recently had occasion to employ the vaginal speculum in the examination of a lady. The exploration finished, he was about to withdraw the instrument, when he felt a light touch upon his shoulder. "Excuse me, doctor", said the patient, "I have long suffered from pain in the stomach. *While you are there*, can you not tell me what is the matter?"—*Lyon Médical*.

**MANIA METAPHYSICA** (Grübel-sucht) is recognised as a new form of mental disease. It shows itself chiefly in young people in constant and useless inquiries into the why and wherefore of things, and is to be treated by small doses of potassium bromide.

**ON ALCOHOLISM AND ITS EFFECTS.**—In his clinical lectures on alcoholism, Dr. Gallard, the eminent physician of La Pitié, makes some important remarks on the effects of alcohol on the stomach. He describes alcoholic gastritis as a mortal disease. Under a prolonged use of alcoholic liquids the mucous membrane is softened, and undergoes ulceration. Lesulet, of Rouen, examined the stomachs of twenty-six drunkards, and in eight of these he found ulcers. If the patient does not die from the ulcers, he dies from slow and gradual inanition: the stomach is incapable of digesting food. This is the inevitable end of the incorrigible drunkard. The only remedy is to cause him to lay aside the habit gradually. Dr. Gallard recommends young physicians to look for alcoholism and its effects among

patients belonging to the highest classes of society. They may sometimes meet with a female patient suffering from nervous or gastric symptoms, caused by the secret use of alcoholic liquids. A physician is easily deceived under these circumstances, and, owing to the social position of the patient, he is often led to assign the symptoms to another cause. This is a delusion which must be conquered. No class of society is free from the vicious taint of alcoholism, and a large number of unexplained disorders are probably due to the pernicious habit of drinking, or an indulgence in what are called stimulants.—*Clinique Médicale de la Pitié*.

**THE Medical Brief** says: "It has been noticed in several cases that when one quarter of a grain of morphia would not produce sleep, if ten grains of quinine were administered a short time previously to administering the morphia, the morphia would almost invariably act efficiently. This fact was noticed in connection with puerperal cases."—*Boston Med. and Surg. Journal*.

**VIRGINIA CIGARS.**—Schwarz has examined the smoke of Virginia cigars (*Chem. Centralblatt*, 1878, No. 7) by the aid of Orsat's apparatus, the use of which instrument he highly recommends for technical analyses. The products of the combustion of the tobacco were collected in an aspirator, and were found to contain 12.0 to 12.85 per cent. carbonic acid, and 4.0 to 4.76 per cent. of carbonic oxide. The presence of the last-mentioned constituent explains the deleterious actions of these cigars.

**MEDICAL EDUCATION IN THE UNITED STATES.**—In an address delivered at the opening of the present session of the Medical Department of the University of Pennsylvania, Dr. William Pepper said:—"I suppose that few persons, who are at all familiar with the subject, would be willing to express even the smallest satisfaction with the present state of the medical profession in this country. It is true that for the past four years all branches of industry have been depressed, but the troubles that affect the medical profession have been steadily advancing and increasing for at least fifty years. Its ranks are overstocked to an unparalleled extent; there is, I believe, no other business in which so small a proportion of those engaged earn a living; it finds successful rivals among the practitioners of such exclusive schools as homœopathy, eclecticism and the like, which, by the concurrent voices of all intelligent communities, no less than by the verdict of scientific investigation, have been declared to be unworthy of confidence and incapable of endurance; and, worst of all, it has failed to elevate its standing and repute with the public, or to exert that powerful influence upon sanitary legislation, upon public and private hygiene, upon education, and upon similar subjects, which is at once its duty and its highest prerogative. It will not, I think, be gainsaid by any that the following points are in reality grave defects in the American system of medical education:—1. The absence of a preliminary examination; 2. The very short term of studies required; 3. The want of personal training in the practical branches; 4. The absence of any grading of the curriculum; 5. The examination of candidates for the degree by those having a direct pecuniary interest in their success." The reforms suggested were: the establishment of a preparatory examination; the lengthening of the period of collegiate studies to at least three full years; the careful grading of the courses; the introduction of ample practical instruction of each student, both at the bedside and in the laboratories, and the establishment of fixed salaries for the professors, so that they may no longer have any pecuniary interest in the size of their classes. Dr. Pepper gave a brief historical sketch of the efforts that had been made by various schools in the United States to institute these reforms. He also predicted that those schools which had not yet adopted them would in time be forced by public opinion to do so, and that thus the higher education would become a fact.

"THE last dose from a bottle containing a mixture of strychnia and bromide of potassium", says the *Detroit Medical Journal*, "poisoned the patient. The bromide had precipitated the strychnia."

# The London Medical Record.

## CONFLICTING VIEWS REGARDING THE TREATMENT OF WOUNDS.

THE recent discussion on the proper treatment of wounds in the Academy of Medicine of Paris, cannot but excite wonder at the widely different views which are still entertained on the subject by surgeons. On the one hand are those who regard the access of air in its ordinary state to wounded surfaces as productive of the most deleterious results; on the other, surgeons who declare the free exposure of these same wounded surfaces to the air to be the most efficient means for obtaining healing of them. The surgeons who hold the former view, as a necessary consequence, give very particular attention to the nature of the dressings applied to wounds, and to the methods of their application; those who hold the latter view regard all dressings, whatever their nature, as more or less hurtful, because they interfere with the access and action of the air upon the wounded surfaces which they cover. The antiseptic, or some other analogous method of treatment, is advocated by the one class of surgeons; the open-air treatment of wounds by the other.

The treatment of wounds by cotton-wool dressings, advocated by M. Alphonse Guérin during the recent discussions at the Academy of Medicine, is based on the same principles as those which have led Mr. Lister to adopt the treatment by antiseptic dressings. The great purpose of the application of the cotton-wool is to provide an effective obstacle to the introduction of germs, by filtration of the air before it reaches the wounded surfaces. Purulent infection will never occur, it is asserted, if only air thus deprived of the corpuscles which resemble the ferments of M. Pasteur, be allowed to approach the injured parts. Only on one occasion, M. Alphonse Guérin stated, had vibrios been found in the pus of a patient under his charge, and that was due to the negligence of the pupil, who had omitted to wash the wound before applying the cotton-wool dressing to it. Whenever vibrios are found in the pus of wounds treated according to this method, whenever pus beneath the dressing contracts a foetid and repulsive odour, it may be taken for granted that the dressing has been badly applied. The filtration of the air is not, however, the only advantage claimed for this treatment by M. Guérin; other benefits resulting from it are the absence of disturbance of the wounded surfaces, which is inseparable from other applications, the gentle and elastic kind of pressure exerted by the cotton-wool, such that no stagnation of fluids is caused in the neighbourhood of the wound, the even and constant temperature maintained by it, and the freedom from pain which is the result of these conditions. The occasional favourable results of the treatment of wounds by drainage, by continued irrigation, by partial exposure to air, and also by the insufflation of air practised by M. Buisson, of Montpellier, M. Guérin ascribes to the influence of a fact made known in a late communication by M. Pasteur regarding the septic vibrio. M. Pasteur has shown that the septic vibrio dies when exposed to the

atmosphere in a thin layer of pus, but that it is found to live and multiply when it is separated from the air by a certain thickness of vibrios which have been deprived of life by contact with it. This fact M. Guérin regards as a revelation of great importance. To an English surgeon, it appears a very noticeable fact how little heed is given to securing union of wounds by first intention, either in M. Guérin's remarks or in those made by the other speakers at the Academy. It seems as if primary union were regarded by them as so exceptional an occurrence, as not to be an event to be looked for in the ordinary treatment of such injuries.

The observations of M. Pasteur, quoted by M. Guérin, might well have been utilised by the Surgical Society of Moscow, which has been particularly forward in advocating the open-air treatment of wounds, and have been embodied in the report of their Committee on the subject, had they been known at the time to those who composed it. As the report of the Committee, which was published last year at Moscow, in French as well as in Russian, under the title of the *Rational Treatment of Wounds, Method of Aëration, etc.*, is not likely to have been seen by many surgeons in this country, it may be useful to give in a condensed form the conclusions which are promulgated in it; they are the following. 1. The principle of direct and free contact of the wound with the ambient air is higher, more rational, and more practical than that of protecting the wounded surfaces against the action of the air. 2. The mode of treating wounds by aëration, elaborated by the Surgical Society, is based, on the one hand, upon a knowledge of the essential anatomo-physiological properties common to all wounds, as well as of those of the external agents to which our bodies are continually exposed, and, on the other hand, is confirmed by a multitude of facts and clinical observations. 3. The essential feature of treatment by aëration consists in avoiding all local appliances for excluding air, and in placing wounds in conditions favourable for free and direct contact with air. 4. It follows that every porous substance laid on the surface or placed in the depths of a wound ought to be regarded as a direct element of mischief. 5. If any unusual circumstance render the employment of such a substance unavoidable, it is extremely important that it should be transformed into a non-porous agent, and endowed in every case with energetic disinfecting properties. 6. Lint and other such substances, as well as rags of all kinds, are hurtful dressing materials, which ought never to be used in hospitals. 7. It is a fundamental rule of the treatment of wounds by aëration, always to seek repair by first intention, whenever anatomical conditions permit it. In all amputation-wounds this is invariably necessary. 8. To obtain cure by first intention, catgut should be used for ligaturing vessels, and metallic sutures for the wound itself. 9. In treating granulating wounds, the granulations should be covered with an adequate layer of secretion, liquid or dried; if they be not so, it is useful to protect them by some semi-liquid substance (disinfected) or else to form a dry eschar with the aid of liquid caustic. 10. Granulating cavities, as abscesses, fistulæ, etc., should in like manner have some mucilaginous liquid, either simple or with the addition of a disinfectant, poured into them. 11. The aëration treatment guarantees wounds against nosocomic infections and septic complications. 12. The treatment by aëration is calculated essentially to improve the sanitary conditions of hospitals, because it banishes dressings



from the wards, and restricts suppuration to the last degree among patients. 13. The reasonableness of this treatment, the facility of application and supervision, and the rapidity of the cures rendered possible by it, assure for it a brilliant future. 14. A knowledge of this method may be rapidly diffused, as its general principles are so simple.

The committee of the Surgical Society of Moscow that has propounded the foregoing treatment of wounds without dressings, or by the method of aëration, professes to explain how it happens that wounds are not only cured by it, but also by the mode of proceeding known as Lister's treatment, which at first sight appears to be diametrically opposed to it. It asserts that the favourable results of the treatment by aëration prove that neither the air, nor aërial agents, exert any bad influence upon wounds. The committee also state that they prove the hurtful effects of ordinary dressings, and make it evident that the special materials which Mr. Lister employs are endowed with properties by which the pernicious qualities of the dressings and bandages themselves are neutralised. So, after all, we are brought to the conclusion that the antiseptics employed in the Lister method of treating wounds do not exert any beneficial influence by their action on the air or on germs contained in it; they only do good by counteracting the baneful effects of the dressings which are unnecessarily employed in that mode of treatment! As the Surgical Society of Moscow specially called attention to the mode of treatment of wounds without dressings on account of the economical and administrative advantages belonging to it, so important at a time when the Russian military hospital establishments were being organised on a vast scale to meet the necessities of the war in Turkey, it will be interesting to learn hereafter how far it has been practised, and with what results, in the treatment of the vast numbers of wounds which that war has occasioned. THOMAS LONGMORE.

#### CHARCOT ON THE INFLUENCE OF INJURIES UPON THE DEVELOPMENT OF HYSTERIA AND PARALYSIS AGITANS.\*

It is well known that certain affections, dependent upon a diathetic disease, may be developed as the result of an injury, and localise themselves in the parts where the pressure, blow, or friction was produced. This is the case in articular rheumatism, both acute and chronic, and in gout, as M. Charcot has many times demonstrated. M. Verneuil and his colleagues have in recent times pointed out the value of the study of facts of this kind from a surgical point of view. It is less known, perhaps, that some of the local phenomena of hysteria manifest themselves sometimes in the same way under similar influences. Sir B. Brodie was not ignorant of this, as many passages of his admirable little book (*Lectures Illustrative of Certain Local Nervous Affections*, London, 1837) fully testify. "He was, perhaps, the first," says M. Charcot, "to draw attention to these phenomena of a local hysteria developed by the direct effect of an injury." "It frequently happens," says Brodie, "that the local symptoms of hysteria appear to be due to the operation of an external cause; and as the injury in question is often very slight, quite out of

proportion to the effects produced, these symptoms are often misunderstood, misinterpreted; they are regarded as something quite different from what they really are. It is not rare," says the eminent surgeon, "to see, for example, a young woman whose finger has been pricked or pinched, complain, a short time after the little accident, of a pain which extends from the fingers up the hand and forearm. The pain may be complicated by a convulsive action of the muscles of the arm, or by a continued contraction of the flexors or of the anterior part of the arm, so that the forearm is kept bent in a permanent manner, at least while the patient is awake, for the spasm is generally relaxed during sleep." "A young girl, aged 11 or 12, pricked the index finger of the left hand with a pair of scissors. This was followed immediately by pain running up the course of the median nerve. On the following day there occurred muscular contractions, fixing the forearm at a right angle to the arm. Some days afterwards all the muscles of the forearm were the seat of violent spasms, producing, in the arm and forearm, singular convulsive movements. Later on, nausea and vomiting supervened, and for two days she rejected everything that was introduced into her stomach. In course of time the other limbs became similarly affected, and it became impossible for the young patient to walk or to stand erect. Now and then there was a spasm of the diaphragm, with threatened suffocation, or permanent closure of the jaws determined by spasm of the masseter, and finally a sharp pain in the head, recalling the pain of the pricked finger. Surgical interference, attempted many times, had rather the effect of increasing the evil. Nevertheless, the cure took place spontaneously at the end of two years." M. Charcot then alluded to a certain number of cases which he had met with in his practice, and which illustrate the theoretical and practical interest of Brodie's observations. Two are now reported, to serve as examples.

CASE I. Towards the middle of April 1877, Mdle. X. in falling hurt the back of her hand against a stool; tolerably smart pain and a little swelling followed. Two or three days afterwards, the little finger of this hand commenced to flex itself in a permanent fashion; then the flexion successively attacked the other fingers, and the thumb was applied to the index and ring fingers. From this time her hand remained permanently clenched, both day and night, even during the most profound sleep, in opposition to the remark made by Brodie on similar cases. The flexion of the fingers was so marked that their reduction was almost impossible, and it was necessary to interpose a cloth to prevent the nails from wounding the palm of the hand. The various attempts made at reduction seemed always followed by an aggravation of the contraction. Things were in this state on the 31st May, six weeks after the accident, when M. Charcot saw the case, in consultation with Professor Richet and Dr. de Wailly. On that day the fist was firmly closed as usual, the wrist also was stiff, like the fingers, and there was complete anæsthesia of the whole hand, wrist, and lower half of the forearm, as marked anteriorly as posteriorly. The elbow did not share in the contraction. Mdle. X. had never suffered from nervous attacks. She was calm, of an equable and rather lively temperament; nothing had changed in her mode of life. There was no trace of ovarian pain. The menstrual periods had occurred twice since the accident, but were unattended with anything of note. There were no modifications of sensibility beyond the parts

\* *Progrès Médical*, May 4, 1878.

noted. Five days after the consultation, without the intervention of any circumstance, her hand suddenly opened, and she recovered all its movements.

CASE II. On the 17th April 1877, Hortense X., aged 27, had the right forearm squeezed between a wall and a turn-table, upon which lay glass articles for polishing. A sharp pain immediately followed in the part submitted to the pressure, and some swelling with ecchymosis, but no wound. She stated that, some instants later, contraction to semi-flexion took place in the ring and little fingers of the right hand. During the succeeding days, the fingers of the other hand were affected by the same sort of contraction. Under the influence of discutient remedies the swelling and ecchymosis soon disappeared, but, the pain and contraction persisting, she decided to come into hospital, and was admitted to Dr. Leroy's surgical wards on June 13, 1877, two months after the accident. The following conditions were noted. The inner four fingers of the right hand were slightly flexed at the metacarpo-phalangeal articulation, so as to form an obtuse angle of about  $130^\circ$  to  $150^\circ$  with the palm of the hand. The two other phalanges of these same fingers were rigidly extended. The thumb, although enjoying a certain mobility, was not quite free; the wrist was also rigid; indeed the general appearance was that of a hand methodically holding a pen. In the whole extent of the arm, forearm, and hand, there existed permanently a pain which from time to time was spontaneously exasperated. The pain was exasperated and became atrocious whenever the patient attempted to execute any movement, and also when the pressure was made upon any part of the limb. This pain was especially intense when pressure was made over the anterior surface of the arm, particularly in the course of the median nerve. If pressure were persisted in, a sort of nervous crisis occurred, which many times had led to loss of consciousness. There was neither redness nor tumefaction of the painful parts; the ecchymosis had disappeared a long while. The exquisite pain produced by the slightest touch rendering a thorough examination of the limb impossible, it was decided, five or six days after her admission, to put her under chloroform. The examination thus made discovered nothing to account for the remarkable pains. It was observed that, in spite of very profound narcosis, the contracted parts were not completely relaxed; in truth, one could, although not without effort, extend completely the fingers, or flex them, or move the wrist in all directions, but as soon as they were released they returned to their previous attitudes. All these accidents, pain, and contraction, had persisted up to the beginning of August, without any modification, when, one of the first days of that month, without appreciable cause, the contraction suddenly disappeared, as well as the pain; then supervened a complete paralysis of both motion and sensation, affecting the whole right upper extremity; of which henceforth there was complete resolution. Soon afterwards it was noticed that the inferior extremity of the same side was also paralysed in motion like the upper, but to a less degree, while in sensation it was quite as complete. This last event led to a careful examination of the sensibility of the whole body; it was found that there existed complete right hemianæsthesia, affecting both general and special sensations, vision and smell included. Moreover, very marked pain was discovered in the right ovarian region, of which, up to this time, the patient had made no complaint. From this time a great number of other hysterical symptoms manifested them-

selves in succession, the hemianæsthesia and ovarian pain persisting without variations. One day it was great dyspnoea, laboured respiration, with threatened suffocation; another day it might be pains in the præcordia, radiating to the left shoulder; or, again, a dry and convulsive cough, a violent fixed pain in the left temple; another day retention of urine. For more than a month she vomited all her food, which did not prevent her from maintaining a certain *embonpoint*. There never was any regular hystero-epileptic attack. It is important to note that she first menstruated at 18, married at 20, became the mother of six children, and had never suffered from any serious illness before the accident which brought her to the hospital. She was very nervous, very irritable; but she never had, properly speaking, hysterical attacks. The phenomena which have been described, viz., hemianæsthesia, paralysis, ovarian pain, various spasms, etc., still were present upon the 24th October, when M. Charcot, by the kindness of M. Leroy, had an opportunity of examining the case.

M. Charcot would sum up our knowledge of this subject of traumatic local hysteria thus. More or less exquisite cutaneous hyperæsthesia, deeper pains occupying the course of the nerve-trunks, or apparently situated more specially in one or several joints, more or less marked contractions,—such are the phenomena which occur immediately after, or a little after, the injury. These symptoms rarely remain limited to the region thus affected, but extend themselves rapidly to neighbouring parts, and can even occupy the whole extent of a limb. Once established, they frequently persist in the same condition, with desperate tenacity, for many weeks, many months, even many years. The slightest touch, the least friction, the smallest movement provoked, exasperates the pains and the contractions. These are also all liable to spontaneous exasperation from time to time, without any external cause. There is sometimes superadded, principally during the spontaneous exacerbations just referred to, swelling, redness, and relative elevation of temperature in the affected parts. As a rule, sooner or later the hyperæsthesia and pains give place to anæsthesia; nevertheless the muscular contraction persists, yet it also may be replaced by paresis, or even paralysis, with resolution of the muscles.

These symptoms, resulting from a mechanical cause, are generally the first revelation of the hysterical diathesis, hitherto latent; and they usually constitute during a long time the sole symptoms, existing alone, without the addition of other nervous phenomena. From this double point of view they ought to be considered as equivalent to those local neuropathic symptoms of the same kind, which are one of the most singular attributes of infantile hysteria. It is not rare, as we know, to see in little girls of 10 or 12 perhaps a nervous cough, perhaps a spasmodic wry-neck, or a permanent contraction of certain muscles of a whole limb, a joint-affection, simulating arthritis or coxalgia, one after the other occupying the pathological scene for weeks or even months; then one day they disappear all at once, leaving no traces. But this is after all very frequently only a truce. Some months, some years later, when the previous phenomena have been completely forgotten, when the sexual functions are established, ovarian hysteria supervenes, with all its train of henceforth classic phenomena, viz., sensorial and sensory anæsthesia, ovaralgia, characteristic convulsive attacks, peculiar psychological troubles, etc. At other times "general hysteria" comes to be



added to "local hysteria", without intermission, without time for repose, and then the relations between the two are easily illustrated. That which has just been said of infantile local hysteria may be applied in all respects to local hysteria of mechanical origin. They are, indeed, but two varieties of the same species. It is very remarkable, in fact, that traumatisms never produce the effects in question, except among young subjects at present destitute of all well-marked sign of generalised hysteria. When ovarian hysteria is developed and established with all its army of symptoms, mechanical injuries do not seem to produce the same effect. Such is, at least, the conclusion to which M. Charcot's observations point; and in illustration, he quotes the case of a patient of his, named Geneviève L., aged 35, who has suffered for many years from hysterio-epilepsy, with generalised anæsthesia, and frequently during the intervals of her attacks is affected with contractions of the limbs, which persist during many days. Many times she has broken, in falling, the bones of a forearm or leg, but these fractures have never been the cause of the development of pains or contractions; consolidation has taken place in the ordinary manner, and has not been marked by any special accident.

Everyone knows the difficulty of diagnosis presented by local hysteria, especially when it supervenes alone. These difficulties are not lessened by the fact that they recognise their origin in a traumatic influence. They have, nevertheless, more importance, as the wrong diagnosis to which they may point (arthritis, coxalgia, neuralgia, etc.) leads to active intervention nearly always untimely and injurious. Observation demonstrates that blisters and cauteries, galvanisation and faradisation, prolonged rest, attempts at reduction of all kinds, division of nerves and tendons, almost always exasperate the malady, and are sometimes followed by more disastrous effects. On the whole, it is only the consideration of the general state that might so inspire therapeutical efforts, and so far as the local phenomena are concerned, the expectant attitude in the actual state of our knowledge is much the most safe. This is, perhaps, the place to recall the words of Brodie, by which in the book referred to above he prefaces his remarks upon the surgical treatment of local hysterical affections. "The advice which I have to give you," says he, "will be generally negative. It is not so much what you ought to do, as what you ought to know not to do."

It is not in hysteria only that the localisation of pathological phenomena may be determined by a mechanical cause. The same fact can be produced in other diseases which, like hysteria, belong to the great provisional group of the neuroses. This is the case, for example, in paralysis agitans, in Parkinson's disease. M. Charcot relates the history of a lady who, falling from a carriage, severely bruised her left thigh; after some time, a sharp pain supervened in the limb, occupying the course of the sciatic nerve, and a little afterwards a tremor declared itself throughout the entire limb. At first temporary, this trembling became later on more permanent and finally extended to the other extremities (*Leçons sur les Maladies du Système Nerveux*, tome i, p. 185). The chief peculiarities of the preceding case were represented, except for some modifications, in two cases which were shown by M. Charcot to his audience. In 1873, F., aged 55, got a sprain of her left foot, with swelling, ecchymoses, etc. Shortly afterwards the swelling and difficulty of walking persisting, she

perceived that her foot trembled. The tremor remained limited to the left inferior extremity until 1876, at which time the hand on the same side was also affected. At the present time the tumour is well marked in both extremities on the left side, and is beginning to pronounce itself in those of the right side also. F. in other respects presents all the characteristic symptoms of Parkinson's disease; immobility of features, stiffness of neck, inclination of the trunk forward, tendency to propulsion and retro-pulsion.

T., aged 72, for the past four years has presented the classic symptoms of paralysis agitans, limited to the right side. Contrary to the rule, she has tremor of the tongue and also of the lower jaw. This tremor commenced last September under the following circumstances. On the 2nd September, while yawning, T. dislocated her lower jaw; the reduction was made immediately without difficulty. From this time the jaw began to tremble, and the saliva commenced to flow involuntarily from her mouth. These observations require no comment.

ROBERT SAUNDBY, M.D.

## THE PATHOLOGICAL ANATOMY OF THE SPINAL CORD IN TETANUS.

By Dr. E. AUFRECHT, of Magdeburg.\*

GENTLEMEN,—I have the honour to bring before you to-day a number of microscopical preparations which deserve your especial interest. Some of them are from the spinal cord of that case of subacute spinal paralysis, upon which I made a communication to you at a previous meeting. I do not intend to go over the same ground again, but I believe I must give, for the benefit of those colleagues of ours who were not then present, a short account of the anatomical appearances. There were degeneration and regeneration of the paralysed muscles; degeneration and regeneration of the corresponding nerves; marked swelling of the epithelium of the connective capsules of the spinal ganglia; no atrophy of the anterior or posterior spinal roots; atrophy of the ganglion-cells of the anterior horns of the entire cord, excepting a very small part occupying the extreme portion of the anterior horns; atrophy of ganglion-cells of the posterior horns, especially in the lumbar region; partial atrophy of the ganglion-cells of Clarke's columns; atrophy of the medullary sheath of the anterior columns, with very decided development of connective tissue fibres; thickening of the vessels of the cord; swelling of the nuclei of the capillaries and the adventitia of the smaller vessels in the spinal roots, spinal ganglia, and the affected peripheral nerves, and especially in the affected muscles. In the present sections equally, there is a diminution in size, always more pronounced from before backwards, of the ganglion-cells of the lumbar, dorsal, and cervical regions; and I particularly point out that the cells lose their pigment more and more, appear very pale, and with their progressive smallness contain no nuclei, but only nucleoli, and even lose these, and become transformed into small empty pale corpuscles. In the same manner, they have gradually lost their axis-cylinder processes, and their protoplasm processes. But let us leave the consideration of these preparations somewhat in the background, and use them mainly

\* Read before the Magdeburg Medical Society, *Deutsche Klin. Wochenschrift*, April 6, 1878.

for purposes of comparison with the other sections of cord which belong to a case of tetanus, and show very important changes. Let us recall the hitherto described changes which have been observed in tetanus.

If I pass over the earlier accounts of these changes, which speak only of more or less marked hyperæmia of the spinal cord, I may take Lockhart Clarke (*Med.-Chir. Trans.*, vol. xlviii, p. 255) as the first who found material changes in the cord. Although he found no marked changes in the coats of the blood-vessels, except in places where they seemed to participate in the surrounding degeneration, the arteries were dilated, and in particular places, where their diameter was double the normal, they were surrounded by a granular and abnormal exudate, in and near which the nervous elements had undergone more or less extensive disintegration. He held it for certain that the structural changes depended upon a diseased condition of the blood-vessels, which led to exudation and nutritive disorder. There was also extravasation of blood from the vessels. The disintegration which was present in particular sections of the grey and white matter, especially around the central canal, consisted in the first stage of a softening of the nervous tissue, by which the medullary sheaths become fatty, opaque, or granular. In the second stage, the nerve-substance became softer, semi-fluid, and more transparent. A great number of nerve-fibres had then disappeared, and their fragments were converted into fine particles, which were mixed with granules of the exuded fluid. This condition he has called granular disintegration. He has seen similar changes of the nerve-substance in different cases of ordinary paralysis. The ganglion-cells of the anterior horns take no part in the lesion.

Dickinson (*Med.-Chir. Trans.*, vol. li, p. 265) examined the cord of a man aged 25, who was attacked by tetanus eight days after a wound of the hand, with injury to a twig of the median nerve, and died eighteen and a half hours later. The cord showed a notable swelling of the cervical region, and at the height of the first lumbar vertebra, and below this point.\* In all parts of the cord he found a high degree of hyperæmia of arteries, veins, and capillaries, in particular places also extravasation of red blood-corpuscles, and a structureless transparent material in the neighbourhood of the arteries, which compressed the surrounding parts. In the cervical region, the left anterior horn showed a more notable injection than any other parts. The lateral and posterior columns, especially the left lateral column, were swollen, in consequence of a thickening of the nerve-fibres, and the presence of an opaque granular material between them. The transparent structureless material he explains as a vascular exudate, and not a product of tissue-metamorphosis. Whenever a certain degree of destruction of tissue-elements in the neighbourhood of the exudation has taken place, this is, as Clarke thinks, the consequence of "the dissolving effect of the exudate on the tissues", especially as the tendency to destruction of the nerve substance, on account of the abnormal state of the vessels, and the insufficient nutrition of the cord, may well become exaggerated.

Michaud (*Archives de Phys.*, 1871-2, page 59) found in the examination of many cases of traumatic tetanus a purple red coloration of the entire central portion of the cord. By microscopic ex-

amination, he saw in the white matter, as well as the central part of the grey matter, numerous nuclei and richly nucleated vessels. The latter were all hyperæmic, very much dilated, and in their neighbourhood there was much exuded plasma. As importantly characteristic, although not peculiar to tetanus, he regards the nuclear proliferation around the central canal, and especially in the posterior commissure. The highest grade of this existed in the lumbar region, wherever the seat of the wound might be which was followed by the tetanus. The entire affection is for him a hyperacute central myelitis. In the peripheral nerves he found nothing which he could consider of general value. In one case of tetanus after a wound of the thorax, he found both extravasation of blood in the neurilemma and perineurium of both sciatics. In an injury of the lumbar region by a fragment of shell, he found atrophy of some nerve-fibres, with increase of nuclei, in others atrophy of medullary sheath in both sciatics.

Benedict (*Nervenpathologie*, Leipzig, 1874, s. 270), in a case of tetanus, found marked hyperæmia of the vessels of the cord, especially around the cells of the anterior horns; also granular degeneration of the cells, mostly in particular zones; for instance, one half showed finely granular pigment. The protoplasm was coarsely broken up, transparent especially at the edge, so that this could not be sharply defined, in parts it appeared eroded or crumbling. The cells looked enlarged, and their processes swollen up. Many cells were atrophied, were first noticed from the decided enlargement, and offered particularly the aspect of colloid metamorphosis. The diminution was equally at the cost of cell-life, apparently less so of the nuclei. The connective tissue-cells surrounding the ganglion-cells appeared very marked and in great number. Of so-called nuclear proliferation there was no trace. He holds the transudation with emigration of formative elements as the first stage of inflammation of the cord in tetanus. With the increase of the transudation pressure begins the chemical change in the nerve-elements; thus begins a chemical and finally an anatomical atrophy of the motor nervous system.

Tyson (*The Practitioner*, August 1877, p. 109) saw, in a case which died three days after the commencement of the tetanus, the following changes. The entire cord was much softened throughout its central part. In the cervical region there was partial disintegration of the grey commissure. The central canal was pushed towards the right, and around it were many round cells. Behind the central canal was an extravasation of blood. The posterior columns were completely disintegrated. In the dorsal region the disintegration had gone further; there was no trace left of the central canal, and excessive hyperæmia was present. In the lumbar region, in consequence of the same lesion, the gray commissure as well as part of the anterior and posterior columns were gone. In a second case, in which death occurred two days after the beginning of the tetanus, he found well marked disintegration of the posterior column in the lumbar enlargement, which had affected all the parts between the posterior horns up to the central canal. There was no hyperæmia nor extravasation of blood.

The case which interests us occurred to a labourer, 41 years of age, who on the 8th September got a compound dislocation of the thumb, which was treated after Lister's plan. On the 16th September occurred spasm of the muscles of the jaw and neck;

\* Schultze (*Deutsches Archiv*, Band xx, p. 390) thinks this swelling artificially produced in removing the cord.



on the 17th the median nerve was stretched, by Dr. Hagedorn, without effect. On the 18th he died. At the *post mortem* examination, we found a considerable quantity of serum in the cavity of the spinal dura mater, evident hyperæmia of the pia mater and grey substance, otherwise nothing special. After hardening for three months, I find in the present sections, from the cervical, dorsal, and lumbar regions, the following appearances.

In the anterior horns of the lumbar region of the cord the ganglion-cells are normal, and of the usual size. There is no obvious change in the protoplasm, nuclei, nucleoli, or processes; only the pigment seems a little more than normal. Their greatest longitudinal and transverse diameters were 63 by 39  $\mu$  (thousandths of a millimètre, .00252 by .00156 inch); in others 78 by 33  $\mu$  (.00312 by .00132 inch); their nuclei measured 12 to 15  $\mu$  (.00048 to .00060 inch); their nucleoli 6 to 7  $\frac{1}{2}$   $\mu$  (.00024 to .00030 inch). In the numerous specimens measured by me, I found very few cells which had a measurement of only 30 by 24  $\mu$  (.00220 by .00096 inch). The ganglion-cells of the posterior horn measured about 32 by 30  $\mu$  (.00128 by .00120 inch). They were all so filled with pigment that no trace of nucleus or nucleolus could be seen. A few also no longer possessed any processes, and looked like little lumps of protoplasm filled with dark granules. One ganglion-cell, of 30 by 19  $\frac{1}{2}$   $\mu$  (.00120 by .00078 inch), contained no pigment, nor any nucleus or nucleoli, but had a diffuse yellow colour, and contained bright shining drops. A cell of 18 by 15  $\mu$  (.00072 by .00060 inch) looked like a completely structureless yellow clump.

Towards the dorsal region the degeneration of the ganglion-cells of the spinal cord became progressively more marked, and in the preparation now exhibited from the dorsal region there is not a single healthy cell to be seen. In the anterior horns, with few exceptions, they are only deep yellow, oval, or rounded clumps, which neither by isolation nor in the preparation can be shown to possess any processes, nor any nuclei nor nucleoli. They equally contain no pigment. Their greatest diameter measured 33 by 21  $\mu$  (.00132 by .00084 inch), or 30 by 27  $\mu$  (.00120 by .00108 inch). The cells of Clarke's columns are also coloured deep yellow, but their nuclei are distinctly visible; they measure 39 by 27  $\mu$  (.00156 by .00108 inch), or 30 by 21  $\mu$  (.00120 by .00084 inch), or 30 by 15  $\mu$  (.00120 by .00060 inch). The appearance of the cells of the posterior horns is the same; their pigment has disappeared, their nuclei are only occasionally visible; the greatest diameter is about 39 by 15  $\mu$  (.00156 by .00060 inch).

In the cervical region the highest degree of change is found present. The ganglion-cells of both anterior and posterior horns are of a diffuse rusty red appearance; there is no trace of pigment-granules, and at the same time no trace of nuclei or nucleoli. The cells in the left anterior and posterior horns are throughout smaller than on the right side. The average measure is 15 by 9  $\mu$  (.00060 by .00036 inch), that is, less than the nuclei of the cells of the lumbar region; only rarely are any larger found. In the largest of all, which are, however, much smaller than normal, the protoplasm has its normal appearance, and contains a nucleus.

The further changes of the grey substance are least pronounced in the lumbar region, but become

more so as the cervical region is approached. In the matrix between the nerve-fibres lie very small, dark granules, and also coarser, more angular, yellowish granules, which have a striking resemblance to the pigment-granules of the ganglion-cells. Similar bodies lie round the central canal in the substantia gelatinosa centralis, which seems to become wider the nearer to the cervical region it is examined. The epithelium of the central canal is quite normal. That its lumen is in many cases narrowed, I might regard as a pathological result, and not the consequence of the mode of preparation. I have made many sections of other cords by the same method, and have never seen this remarkable narrowing. Not only dark granules and angular grains lie in the clear matrix round the central canal, but in the upper dorsal and cervical regions there are numerous brilliant spherical bodies without any contour; I can only say that they look like oily particles. A relation to cell-structures is the less to be supposed, as, according to Henle especially, there are almost no cells present around the central canal in man. Similar is the condition before the white commissure, also in the depth of the anterior fissure under the arachnoid, the highest grades being still limited to the cervical region. The thickness of the clear matrix in which the granules and grains lie is not so marked here as around the central canal, and the oily-looking round bodies are present in smaller number. In the white substance in the neighbourhood, grains and granules are also found, and there are numerous fibres whose medullary sheaths contain very minute granules, and consequently look as if dusty.

The blood-vessels of both substances, the capillaries as well as the arteries and veins, are filled to bursting with red blood-corpuscles. The hyperæmia of both arteries and veins was completely proved by teased-out preparations, in which both sorts of vessels running together and anastomosing were completely isolated from the surrounding parts. In the lumbar region especially I found frequently a hyaline-looking substance lying near the larger vessels, which either looked dull or showed quite short, thick, bright, transverse lines. It was attached to the coats of the blood-vessels, and clung to them after their isolation. Two of the present preparations demonstrate this in the clearest manner. I am inclined, in accordance with Clarke, to consider these masses as fibrine, but I must at the same time confess that I have seen this same substance inside the central canal of the lumbar region. Much more frequently than these masses of the dark granules, yellow grains and single fat-granules before described were seen lying in the adventitia of the isolated vessels.

So much for the appearances in the cord. It is a question what meaning to attach to them. In the face of so many negative results, it is impossible from this single case to draw any general conclusions. In this case of tetanus the parenchymatous inflammation of the ganglion-cells was the primary process, and began in the cervical region, passing down to the lumbar region, and causing death before the anterior horns of the lumbar regions were affected; finally, the lesion of the ganglion-cells led to their destruction and to flooding of the nervous tissue with the dark granules, pigment-grains, and fat-drops, resulting from their disintegration.

ROBERT SAUNDBY, M.D.

## ROSENBACH ON THE PHYSICAL DIAGNOSIS OF PLEURAL EXUDATIONS.

In a paper on the above subject (*Berliner Klinische Wochenschrift*, March 25) Dr. Rosenbach, of Breslau, observes that the changes in the percussion-sound of the thorax caused by the respiratory movements and by changes in the position of the patient, though of considerable moment, have as yet been insufficiently attended to, although a certain influence which these and other similar circumstances exercise on the result of the percussion has not been unnoticed. The tendency has been to rather exaggerate the diagnostic value of these purely external conditions; and Dr. Rosenbach holds that the changes, both as regards pitch and intensity of the percussion-sound as caused by alterations in position, and by respiratory movements, refer to the thoracic walls rather than to the lungs, and that differences in the tension of the lungs do not explain the variety of the percussion-sounds during respiration. Thus, the increased resonance of the thorax in the sitting posture is due not so much to changes in the lung as to the increased tension of the thoracic wall; hence, the higher pitch of the sound in the upright, compared with the recumbent, posture, can furnish no evidence as to the size and situation of pulmonary cavities. The same applies to alteration in the sound when the mouth is open, and when it is closed. Indeed, it is possible to almost efface the tympanic sound usually given by caverns, or by the abdomen, by means of a full inspiration, or by increasing the tension of the abdominal muscles. It is, therefore, evident that, in comparing by percussion two symmetrical portions of the thorax, as, for example, the clavicular regions, care must be taken to do so during precisely the same stage of respiration. If we percuss one side during inspiration, and the other during expiration, the sound in the latter case will usually be lower and louder. If the apex of the lung give a distinctly louder sound during inspiration, we may almost certainly infer that the parenchyma is neither consolidated nor shrunken. In cases of pleuritic exudation we may, in like manner, conclude that a full sound during inspiration indicates that the lung tissue is still capable of inflation.

Dr. Rosenbach's observations refer principally to the changes in the percussion and auscultation sounds, induced in cases of pleuritic exudation by a continued erect position, and by deep inspirations, especially in the posterior portions of the thorax. Five cases came under observation. There was dulness extending to the spine or the angle of the scapula in all cases, rapidly diminishing laterally, but increasing downwards, and with bronchial breathing over the area of dulness of various intensity. All cases, excepting one, were under observation in the first week of the disease, and all recovered within four weeks. The first case related was that of a young man, with well marked symptoms of pleurisy. In the morning (during the second week) dulness extended posteriorly to the spine of the scapula on the left side. Below the spine of the scapula, breathing was bronchial; above, uncertain. In the afternoon of the same day, the dulness extended with only moderate intensity to the angle of the scapula, while over it the breathing was purely vesicular; further down, there was only feeble vesicular breathing, and bronchial breathing existed only over the lowest portion of the lung. This remarkable change could

scarcely be attributed to resorption. On the next morning, and after a good night, the physical condition was precisely the same as on the morning before. The change in question was, therefore, evidently due to the difference in position, and to the kind of breathing. It was also ascertained that on the previous afternoon the patient had, for several hours, walked about his apartment. When this was now repeated, the same changes occurred as on the afternoon before. Subsequently, similar changes, and of the same nature, were observed in the other cases. In one case, three distinct zones of sound could be distinguished—1, a zone of normal sound, extending to the lower (*sic*, superior?) angle of the scapula; 2, a zone of rather loud tympanic sound, about an inch wide, and gradually passing into the lowermost region of absolute dulness. Similarly, while loud and bronchial respiration had prevailed about the angle of the scapula, vesicular breathing was now heard over the first two regions, while feeble bronchial breathing existed over only the lowest, dull region. These changes in the result of percussion and auscultation could be produced at will during the latter half of the second week, by permitting the patients free exercise, or confining them for a certain time to the recumbent position in bed. It is also worthy of remark, that in all these patients, on their assuming the erect posture, the upper and posterior limits of dulness rapidly diminished towards the sides; a matter of considerable importance in explaining the changes in the sound.

On summing up these observations we obtain the following interesting results. In average sized pleuritic serous exudations in which the area of dulness posteriorly diminishes rapidly laterally, and in which inspiration is distinctly accompanied by increased resonance, an entire change in the results of auscultation and percussion can be produced by a deep inspiration or by moderate exercise in the erect position. This may proceed from two causes; either that the dulness is produced by a viscid dense exudation, holding in suspension morbid products which may be deposited on the folds of the pleura; or that the lower area of dulness is due to fluid exudation, the upper to collapsed portions of the lungs. The latter is the more probable hypothesis, and the atelectasis of the lung occurs, probably, through the pressure exercised on the lung in the recumbent posture. When the lung is partially expanded by a forced and deep inspiration, the resonance is proportionately increased, and the breathing becomes at the same time more vesicular in character, while at the lower portions, where, owing to the presence of the fluid exudation, the lung tissue cannot expand, the respiration continues more or less bronchial, and the dulness also remains. In estimating the amount of exudation it is, therefore, important to cause the patient first to inspire deeply several times, so as to expand the previously collapsed lung portions; so also, if it be doubtful whether a case is one of simple pleurisy, or whether this is complicated with pneumonia, and in the absence of the characteristic signs of pneumonia, a change in the limits of dulness and in the respiratory sound, when the patient sits up, would show it to be a case of collapsed lung only. Lastly, as to treatment, a methodical exercising of the lungs, by frequent inspirations, would materially change the condition of collapsed portions of the lung-tissue, and would either prevent the formation of exudations or aid in their removal by absorption.

W. J. TREUTLER, M.B.



## ON THE USE OF THE NASAL DOUCHE.

By Dr. WEBER-LIEL, Teacher of Aural Surgery,  
in the University of Berlin.

(Concluded from page 192.)

As regards the conditions under which inflammation of the ear is developed as a result of the entrance of fluid into the tympanic cavity, I have first to observe that all the publications on this condition have hitherto omitted to notice a main question, which, in my opinion, is of the greatest importance.

The question must be put: Do all fluids, when they penetrate to the middle ear, exercise so mischievous an action that violent reactionary inflammation must be the result? Neither have observations been made, nor experiments instituted, to answer this question. I would first call to your remembrance the statements made by Gruber, who, after injection of medicated fluids into the middle ear, observed symptoms of irritation in the ear, but no inflammation. I would also direct your attention to some of my publications,\* in which it is stated how various medicated solutions, introduced into the middle ear through the Eustachian tube, produced various degrees of inflammation. For instance, after injections of sulphate of copper or sulphate of zinc, I indeed observed severe inflammation of the middle ear, but never perforation of the membrana tympani; while, on the contrary, after the introduction of a solution of nitrate of silver or of corrosive sublimate into the tympanic cavity, violent inflammation, rapidly followed by perforation of the tympanic membrane, was always developed after a short time.

In the course of last year, in conjunction with my pupil, Dr. Acker of Washington (who, at my suggestion, has published a dissertation on injections into the naso-pharyngeal space and the Eustachian tube), I made experiments on animals on the action of various medicinal solutions on the middle ear, when they reached this part through the Eustachian tube after injection through the nose.

The result of these experiments, which Dr. Acker has described, and which I afterwards carried still further, was as follows. If a strongly coloured fluid were injected with a small naso-pharyngeal syringe into a rabbit (the syringe being firmly fixed in one nostril and the other nostril being closed, and the syringe being rapidly emptied by firm pressure on the position), a portion reached the tympanic cavity, as was shown by *post mortem* examination. If, when the injection was made into one nostril, the other were not closed, the injected fluid immediately escaped through the unclosed nostril; the necropsy showed that none of the coloured fluid passed into the ear, and there was no inflammation. Several experiments were made with warm solutions of salt, of different degrees of strength; both nostrils were closed, and forcible pressure was used in injecting, so that the fluid must reach the ears. The animals on which I operated were killed after some hours; those on which we both made experiments, on subsequent days. On *post mortem* examination it was found that, as a result of the passage of the salt water into the tympanic cavity, a high degree of inflammation had been developed in a short time (the vessels of the promontory and of the tympanic mem-

brane were considerably injected, and there was much secretion, containing white corpuscles). After a longer duration of the inflammation, perforation of the membrana tympani took place; in the animals which we examined the membrana tympani was perforated, and in one rabbit not only the tympanic cavity but the external auditory passage was filled with fibrinous purulent exudation. The injection of a weak solution of nitrate of silver was also followed in rabbits by suppurative inflammation of the tympanum and perforation of the tympanic membrane.

Quite different were the results, when solutions of pure carbonate of soda were used for injection; in none of the cases was there perforation of the tympanum, even though traces of a transient inflammation were found in some of the tympanic cavities.

These observations agree perfectly with those which there has been an opportunity of making on man. I direct attention especially to the fact that, in all the cases in which dangerous inflammation of the middle ear has followed the use of the nasal douche, the accounts agree in stating that aqueous solutions of salt were used; just as perforative inflammation of the tympanum was produced experimentally by injecting salt water into the nostrils of animals. On the other hand, the results of injecting pure soda solutions in animals show that these exercise a much less dangerous influence with regard to the middle ear. And the conditions do not appear to be otherwise than similarly favourable in man; perhaps, as an exceptional misfortune, subacute inflammation of the tympanum might be produced if strong solutions of soda reached the cavity; but I have never yet seen evil results of the kind after the injection of soda. By means of the tympanic catheter contrived by me (the *koniantion*) medicated solutions can be thrown into the tympanic cavity while the membrane is uninjured. This method of treatment with soda solution I have already employed for several years in various affections of the tympanum (adhesions, the presence of inspissated secretions in the cavity); and I can declare with perfect certainty, without exposing myself to the risk of making a doubtful statement, that the penetration of a solution of soda direct into the tympanum is not followed in any single case by considerable pain, or by inflammation of the middle ear. It may be objected that it is uncertain whether the medicated solution used in my procedure reaches the tympanum. To meet this objection, I usually make the following experiment in my course. To the solution of soda a small quantity of aniline red (free from arsenic) is added, so that the fluid has a red colour; the experiment succeeds best in patients in whom there are extensive adhesions on the tympanic membrane, as shown by examination. The small tympanic catheter of the *koniantion*, perforated at the side, is carried through the silver catheter into the tympanum, and, by means of strong intermittent compression of the bulb of the instrument, the fluid is pressed into the cavity.

I can remember no case in which, after this operation, a painful sensation in the ear was complained of either spontaneously or on inquiry. Soon after the injection, the passage of the coloured fluid into the tympanum is generally rendered sufficiently evident by the coloured parts becoming visible through the membrane, especially at the anterior part of the membrana tympani, and about the adherent parts.\*

\* *Deutsche Klinik*, No. 3, 1866; and *Monatsschrift für Ohrenheilkunde*, Nos. 4 and 6, 1876: "On the Symptoms of Inflammation produced by the Passage of Fluids into the Tympanic Cavity: their Prophylaxis and Treatment."

\* I was led to the observation that a fluid coloured with pure aniline may be unhesitatingly injected without any mischief, by the mistake of one of my pupils, who, in using the tympanic catheter and *koniantion*

For several years I have used warm soda solutions exclusively for the nasal douche, and, as has been observed, I may declare openly that, if the patients have been kept in the condition ordered after the injection, I have never met with any unpleasant accidents or inflammatory conditions as the result of the nasal douche. The above-described experiments on animals in some measure afford an explanation of this fact.

Solutions of salt, then, should no longer be used for the nasal douche, but weak solutions of soda alone.

I have also no doubt that the occurrence of a more or less mild attack of inflammation of the middle ear depends not only on the condition of the tympanic cavity, but also on that of the mucous membrane of the naso-pharyngeal space and of the Eustachian tube at the time when the injection is made. Most aural surgeons agree, indeed, with the observation, that the most powerful injection may be made without hesitation into the naso-pharyngeal space when, in a case of chronic suppurative catarrh, there is a loss of substance in the membrana tympani; the fluid injected into the nose is seen to flow through the openings in the membrana tympani and out of the external ear. Even when solution of salt has been used, and the necessary care has been taken to prevent cold by stopping the external openings of the ears and tying them over, I have never yet seen inflammation of the middle ear produced in these circumstances. The condition is different when the parts are already in a state of high irritation or sub-acute inflammation. This is especially the case in the subjects of chronic catarrh without loss of substance in the membrana tympani. According to my experience, it is not of equal importance whether, in using the nasal douche, a naso-pharyngeal catarrh is attacked at its commencement or not until it has reached its height. The mucous membrane of the Eustachian tubes, as well as that of the tympanic cavity, participates with extraordinary ease in all irritative conditions of the naso-pharyngeal space, especially when, as in many ear-diseases, it is in a state of hyperæmia. In young persons especially, such accidental conditions of irritation are signalled by certain subjective symptoms—occasional pains, pricking in the ear, increased feeling of fulness, increased pulsation-murmurs. If at such a time the irritant action of the naso-pharyngeal douche be added, the result is always an increase of the inflammatory state; the least cold is in some cases then capable of producing severe inflammation. I once made in my own person an experiment bearing on this point by demonstrating on myself, during a cold, the use of the nasal douche with a fluid which no longer remained warm. None of the fluid, indeed, entered the tympanic cavity; this can be well judged of by an observer who, by experiments on himself, is familiar with the different sensations produced by the entrance of fluid into the Eustachian tube or by the introduction of a bougie; immediately after the injection there was no other sensation than a burning in the right side of the naso-pharyngeal space, in the neighbourhood of the mouth of the tube. Some hours later, however, when I had spoken much, every movement of deglutition began to be unpleasantly perceptible, and there was an increased sensation of warmth, with occasional burning, in the middle ear.

antion, charged the syringe from a vessel containing a weak solution of aniline. The case at the time caused me much anxiety, but, as subsequent examination showed, it went through its course without any symptoms of reaction.

Then followed a violent feeling of pulsation in the ear, and, when I attempted to blow the nose there was painful distension of the membrana tympani, and a sensation as of crackling of mucus. Warmth and closure of the ear gave relief; and, as I remained quiet the whole of the next day, and did not leave my room, the threatening symptoms disappeared. I believe that I may consider myself convinced that if, as might well have been the case with a non-professional person, the precautionary measures just mentioned had not been adopted, the irritation would have increased to a violent inflammation of the middle ear, even though none of the fluid of the douche reached the part.

It thus appears that the condition of the patient, after the injection into the naso-pharyngeal space has been made, must be most precisely regulated with reference to the irrefutable assumption that after the nasal douche an individual is in a condition of increased disposition to the occurrence of inflammation of the middle ear, and this especially when a hyperæmic condition of the middle ear is already present. Such acute inflammatory symptoms, to the development of which the douche has only given or increased the disposition, do not appear immediately after the irritation, but after an interval in which the patient feels quite well; they are first developed in the course of from four to ten hours, under the additional influence of further unfavourable conditions, and exposure to cold after exertion or heating must be prominently mentioned as such. Especially, then, when the use of the nasal douche is immediately followed by the slightest feeling of discomfort in the ears, the patient must be enjoined not only to stop the ears closely, but also to protect them by tying a bandage over them, to remain quiet during the rest of the day, to avoid conversation, and on no account to visit societies, parties, or the theatre.\*

Finally, that the condition of the patient during the use of the nasal douche furnishes a further unpleasant element, in virtue of which the passage of the fluid into the middle ear becomes a factor in the production of inflammation, has already been recognised and described by previous authors. Accordingly, the patient should never use the douche unless his breathing be tranquil: during its use, he should avoid speaking and swallowing, and, if the act of deglutition can no longer be suppressed, he should immediately remove the douche: care must also be taken during the douche to hold the head erect, not inclined either backward or forward, especially as in the latter case the fluid easily enters the frontal sinuses; further, it is correctly recommended that the nose should not be blown after the douche, as by this act fluid and mucus, driven by the water-pressure of the douche into the openings of the Eustachian tubes, are easily forced on into the middle ear. It is also important, as I have already pointed out, that the injection be made into that nostril which is the less permeable and the more swollen, so that the water may escape from the naso-pharyngeal space without impediment. Fränkel's additional proposal to cause the vowel *u*, *u*, *u*, to be sounded during the nasal douche seems to me especially judicious, when a wide Eustachian tube and insufficient contractile power on the part of the

\* On carefully reading the published accounts of inflammation of the middle ear after the nasal douche, it will be found in the more fully reported cases that the patients either suffered from cold when the douche was applied, or that after it they were exposed to opportunities of taking cold, as in railway travelling, etc.



levator palati render the passage of the fluid into the tube more easily possible.

All these points, however, yield in importance to the fact proved by experience and experiment, that the quality of the fluid used for the nasal douche is the principal factor which beyond all others determines the possibility of the occurrence of an inflammation of the middle ear. I am convinced that if in future, not solutions of salt, as hitherto, but warm solutions of soda, be used for the nasal douche, or, better, in the manner which I have recommended, my colleagues, if at the same time they adopt the other measures of caution, will have as little unpleasant experience of the use of the douche as I have had.

A. HENRY, M.D.

## TWO CASES OF POISONING BY CARBONIC OXIDE GAS.

By Dr. GLONNER, of Wasseburg.\*

THE researches of Hoppe-Seyler, Lothar Mayer, and Claude Bernard, have established that carbonic oxide gas has the property of displacing oxygen from the blood while circulating in the body. Their experiments have further shown that carbonic oxide forms an intimate combination with the red colouring matter, and prevents it from taking any additional portion of oxygen. As a result of these chemical changes and other phenomena in connection with them, Claude Bernard, Hoppe-Seyler, and others, have drawn the inference that this gas causes death by asphyxia owing to the want of oxygen in the blood, while Klebs maintains that the fatal effects arise from an atony of the vaso-motor system as an effect of the deficiency of oxygen.

Dr. Glonner does not consider it necessary for him to give a decision in favour of either of these theories. Further researches are probably required in order to show which is the more correct view.

On the 12th November last, at 1.30 p.m., he was suddenly summoned to see the two deceased persons whose cases are here related. They were husband and wife, employed as weavers, the husband sixty-three, and the wife sixty-one years of age. The daughter stated that she had been searching for her parents, and finding the door of their bedroom fastened had it forced open, when the two were seen lying dead in bed. From the time of opening the door until the arrival of Dr. Glonner, nearly ten minutes had elapsed; but, in spite of the shortness of the interval, there was no smell of any vapour arising from combustion. The room in which the bodies were found was 18 feet long by 14 wide, and eight feet high; it contained about two thousand cubic feet of air. On the right of the entrance, in a corner of the room, was a common earthenware stove, of which the trap was completely closed, so that all the products of combustion would escape into the room. The fuel used consisted of dry twigs, roots of trees, and small branches collected from the banks of the river Inn. The stove was completely filled with fuel and ashes. Opposite to the stove, and at the distance of about a foot and a half from it, was the bed of the woman. Her body was not on it, but the state of the pillows, etc., showed that she had been lying there during the night. At a short distance, and nearer to the door, was another bed, that of the man. He was lying upon it, crouched up in one corner.

His body was completely covered. Fæcal matter had evidently passed from him copiously. Near the back of the man was the body of the woman. She was covered, except below the knees. The feet were curved inwards. Some fæcal matter had also escaped from her.

From the position of quiet sleep presented by the man, and the fact that the woman, partially uncovered, was found on her husband's bed, it was inferred that she had been suddenly aroused, and had left her own bed with the intention of opening a window or the door. The stupefying effects of the gas, however, rendered her powerless to do more than throw herself into the attitude in which her body was found on her husband's bed.

The deaths of both these persons must have taken place between ten and eleven o'clock at night. They were seen for the last time at ten o'clock p.m. Their preparations for the Sunday had been made with great care. There was considerable warmth in the abdomen of each when the bodies were discovered at twelve o'clock on the following day; cadaveric rigidity was at the same time well marked; the cornea of the eye was dull, and there were many patches of cadaveric suffigation.

A *post mortem* examination of the two bodies was made on the following morning by Dr. Glonner and the district medical officer, Dr. Ziesl. There were no striking pathological changes in either case. On removing the sternum, it was noticed that the muscles, blood, and lungs had undergone a change of colour. It is well known that exposure to the oxygen of the air alters the colour of all the organs which contain much blood. In these two cases there were not merely reddish spots, but large patches of colour, assuming an arborescent form, the vessels under exposure to air building up the most remarkable pictures in bright colours, resembling those of minium, cinnabar, and carmine. The small vessels were dilated, and took a serpentine course. These coloured patches underwent changes from the air, according to the duration of the exposure. Thus, in a long incision of one of the lobes of the lungs, fifteen seconds elapsed before a clear minium red colour appeared. In about a minute this passed into a cinnabar red, and finally it assumed a carmine red colour. The presence of this colour indicates a longer time of exposure. It was found that at least half an hour was required for its production in the sections of organs much infiltrated with blood.

In the muscular substance of the heart these changes of colour are much slower in taking place, yet the author found the order of coloration in this organ to be similar, *i.e.*, the changes occupied from 45 to 50 seconds, the muscular fibre first assuming the minium tint, then that of cinnabar, and lastly that of carmine. For the demonstration of these changes of colour in the liver as the result of poisoning with carbonic oxide, an exposure of 30 seconds was found to suffice; in the kidneys from 55 to 60 seconds; and in the spleen from 12 to 15 seconds. The rapidity of coloration depends in some measure not only on the length of exposure, but on the quantity of blood contained in the organ. A muscle stained with blood underwent a change of colour after one minute, while a section of bloodless muscle required three minutes for the change. Coagula of blood of the size of a walnut or hazel-nut, or spots like pins' points, passed through these changes of colour to a cinnabar red tint.

The lungs and heart of the man were much more saturated with carbonic oxide than the corresponding

\* From No. 50 of the *Aertliches Intelligenz-Blatt*, 1877.

organs of the woman: the oxygen of the air required a longer action upon these organs before the above-mentioned changes of colour were brought out.

[The researches of Claude Bernard have shown that in death from carbonic oxide the blood and all the organs containing it are of a bright red colour; but Dr. Glonner is the first who has noticed and described a gradual change of tint, which he refers to the displacement of carbonic oxide by oxygen. Carbonic oxide has been found to pass rapidly into the blood. In an animal breathing air containing ten per cent., not less than four per cent. has been found to pass into the blood in from ten to twenty-five seconds, but then there is reason to believe that it is as rapidly eliminated. The theory of Dr. Glonner requires that in these cases the blood should have retained the gas for two days after death, which is very improbable, considering that so small a quantity of it is sufficient to destroy life. An atmosphere containing only one-thirtieth part has proved fatal to rabbits in about half an hour.

Dr. Glonner assumes that in the cases of these two persons death was caused by carbonic oxide; but the burning of the fuel mentioned would operate by evolving a larger proportion of carbonic acid, and by completely deoxidising the air of the chamber. The carbonic oxide was probably only a small constituent of the noxious atmosphere. At any rate, we have no demonstration of its presence or existence.

The changes of colour in blood, and the organs containing it, on exposure after death have been frequently observed in cases in which the presence of carbonic oxide could not be suggested. The novelty of Dr. Glonner's view in reference to these cases, is that he observed marked variations of the red colour in different organs; and was able to note the time required for their production.

No question seems to have been raised upon the fact of death from accident or suicide. The door of the room was closed, so that force was required to open it, and the trap-door of the stove communicating with the flue was also shut. These facts point to intentional self-destruction; at the same time, they admit of explanation by the ignorance of the deceased.—*Rep.*] A. S. TAYLOR, M.D.

## ERICHSSEN ON SURGICAL EVIDENCE IN COURTS OF LAW.

MR. ERICHSSEN has earned the gratitude of practitioners by publishing in the *Lancet*, March 23, 1878, and subsequent numbers, a valuable series of papers upon the above subject. The following short *resumé* gives a general idea of their scope and value.

The position of surgical witnesses, and the conflicts of evidence, are first treated. The excessive annoyance, inconvenience, and loss to which medical men are often unnecessarily subjected by being subpoenaed, under severe penalties, wherever the venue may be laid, leaving their typhoid, obstetrical, and other urgent cases, perhaps for days together, and all for most trivial cases, where their evidence, after all, may not be required, nor their loss of time in any way compensated, are fully dilated upon. It is shown that the present mode of calling surgical witnesses deprives many sufferers from accidents of the most skilled surgical aid which this country can afford. If a surgeon refuse to see an injured person, he not only damages his own practice, but inflicts a hardship on the sufferer; whilst if he see him

he punishes himself by being compelled, under a subpoena, to attend the trial at great inconvenience, both personal and to his other patients. For example, in a recent case of a very trivial character, no fewer than three medical men were called from the Isle of Portland and detained in London for several days.

The evils attendant upon calling surgeons on one side and the other in compensation cases is shown to lead to conflicts of opinion puzzling alike to judge and to jury. That this conflict is not so great as is believed, Mr. Erichsen proves by stating that 90 per cent. of all cases of surgical injury are settled out of court, both sides being agreed as to extent, etc. In less than one-tenth a discrepancy of opinion will arise, not as regards the real facts of the case, but as regards the possible pathology, the real extent of the injury, and probable duration of the symptoms consequent on the injury sustained.

The injurious influences of the present system on witness, counsel, and judge are manifold; and Mr. Erichsen shows that the effects produced upon the mind of the surgical witness and upon the character of his answers are greatly to be deprecated. He is apt to become positive and dogmatic in his replies, one surgeon stating, "I dissent from every word given in evidence on behalf of the plaintiff"; while another designated the electric test to determine the irritability of muscles as a "mere toy". He becomes afraid of venturing out of the beaten track in explaining symptoms before a non-medical audience, for fear of his meaning being misconstrued. Again, the impossibility of an unscientific jury comprehending the proper bearing of ordinary means of scientific investigation is ably commented upon; and then comes the unhappy plaintiff, after weeks and months of suffering passed in his own house, surrounded with every care and attention, too ill to take exercise or to attend to his business, dragged up to London or to some other place distant from his house, to the place of trial. A day or two before the case is tried, he is subjected to a medical and surgical *levée*, for it is no consultation; each one present may ask him what he pleases and examine him as he likes. It is, in fact, an examination of one party of medical men in the presence of another. The next day is possibly fixed for the trial; the plaintiff must attend, but a partly heard case is on, and perhaps is not concluded for two or three days, during the whole of which time he must wait about in close pestilential courts, or in open draughty lobbies, etc., with no fire, no couch, nor any other comforts that sick men need. At last the case comes on, and the plaintiff is placed in the witness-box, and then we have the edifying spectacle of a patch of sclerosis, etc., perhaps no bigger than a pea, argued about by counsel as ignorant of pathology as either the judge or jury, or more so. The effect of the novelty of his position, his cross-examination, etc., is either to harden the plaintiff, or to unnerve him and cause him to burst into tears and sobs; in either case is he open to misconception by the jury; indeed, from a careful review of the whole subject Mr. Erichsen believes there is evidence that there is nothing more fallacious or likely to mislead than the plaintiff's demeanour in the witness-box, and that his presence in court can serve no good purpose in enabling the jury to arrive at a correct opinion as to his actual condition, physical or mental.

To remedy some of the evils attending the present system of subpoenaing, indiscriminately, all those medical men who have at any time attended the



plaintiff, Mr. Erichsen suggests that the fees allowed should be raised to a fair and adequate remuneration, and allowed for in the taxed costs; then the practice of subpoenaing by wholesale would be checked, and those called would receive a more fair remuneration than at present. Again, more evidence might be taken by means of affidavits than is at present allowable: the manifest advantages of this are numerous, yet, while trial by jury exists, this is impossible, although, in far more serious cases than those for compensation for injuries, viz., in lunacy, a medical man's certificate is received without any sworn affidavit accompanying it.

The inadvisability of requiring scientific evidence to be given upon oath is forcibly dilated upon. The surgeon swearing he believes a limb will be as useful as ever in three months, and the other swearing he thinks it will for ever remain stiff, may be equally truthful, each swearing to what he believes in his own mind.

Lastly, Mr. Erichsen suggests the appointment of medical assessors in disputed cases, that at least two medical men of known reputation should draw up a report of the plaintiff's past and present condition and future prospects. This report would serve as a guide to the Court in coming to an opinion on the purely surgical or medical part of the case, and afford it that information, which men who admittedly know little of a subject on which they are to decide, must necessarily be supposed to desire. The experts or assessors should be appointed by the Court, not by the litigants. This plan would, Mr. Erichsen believes, be highly advantageous to the medical, as well as to the legal profession.

RICHARD NEALE, M.D.

#### NOTHNAGEL ON CEREBELLAR DISEASE.\*

THE conclusions arrived at in this paper are based upon an analysis of about 250 recorded cases, besides the personal observations of Professor Nothnagel himself.

Sometimes disease of the cerebellum causes no symptoms during life which could indicate any brain-lesion, even though an extensive destruction of cerebellar tissue exist. Some authors have concluded that cerebellar disease, as such, never gives rise to any symptoms, but that those which have been observed in some cases are to be attributed to functional disturbance of neighbouring parts. This inference is wrong. The nature of the morbid process has little to do with the presence or absence of symptoms; apoplexy, softening, abscess, tubercle, other tumours or atrophy may, under certain circumstances, exist in the cerebellum without producing symptoms. The area of tissue involved has, within certain limits, no noticeable influence; tumours of the size of a walnut, or larger, may remain "latent". It is the situation of the lesion which exercises the greatest influence over the production of symptoms; *disease can only exist without symptoms when localised in one hemisphere*, and not influencing, by pressure or otherwise, surrounding parts. Cases are plentiful in which disease of a cerebellar hemisphere has been accompanied by marked symptoms; yet the author believes that an analysis of them justifies his opinion that in all of them the symptoms were caused by the influence of the lesion upon neighbouring parts of the brain. The following proposition is held to be in

accordance with the facts. *A loss of substance in one hemisphere of the cerebellum causes no symptom of disease, or at any rate none which is recognisable in the present state of our knowledge.*

As the result of a series of experiments, the author found that *the destruction of one or even both cerebellar hemispheres in the rabbit causes no symptoms of deprivation (Ausfallsymptome)*. (Virchow's Archiv, 68 Bd.) This does not for one moment involve the supposition that the hemispheres of the cerebellum are superfluous organs without function; it is only maintained that the lesion of one hemisphere causes no symptom which is at present recognisable, no disturbance of motor or sensory function nor of the nerves of special sense.

Several authors, and most recently Otto (*Arch. für Psychiatrie und Nervenkrankh.*, Bd. iv and vi), have expressed the opinion that the cerebellum stands in a certain relation to the psychic functions; it has been held to be the seat of memory or of the emotions. Otto comes to the conclusion that it acts as a regulator of the will.

It is probable that the solution of the question as to the true functions of the hemispheres of the lesser brain will only be reached through observations on the human species, in which they are most largely developed. Of all pathological processes, atrophy seems to be the best fitted for these observations, as it may affect both hemispheres in equal degrees, and to a considerable extent, without affecting neighbouring parts of the brain. On looking through the recorded cases of this kind it is found that, in addition to the so-called disturbances of co-ordination, mental symptoms are generally described.

Supported by these observations, and by the fact of the increase in size of the cerebellar hemispheres observed in lower animals the more nearly they approach to man, Professor Nothnagel is inclined to think that the hemispheres of the lesser brain are in some relation with the psychic processes. The state of our knowledge does not at present, however, justify even a supposition as to the nature of this connection. It must not be forgotten that, in some cases of bilateral atrophy of the hemispheres, the intellect has been reported as normal.

From the above considerations, it may be laid down that *local lesions which in their action are limited to one cerebellar hemisphere cannot be diagnosed.*

Excluding the cases which have presented no symptoms, it is found that in cerebellar disease the most various symptoms have been noted, the great majority of which are unessential, or only indirectly due to the disease. Of great significance, however, are the disturbances of co-ordination and giddiness. After a careful consideration of all published cases, Nothnagel feels justified in stating that *disturbances of co-ordination only occur when the median lobe (vermiform processes) is directly or indirectly affected by the disease.*

Only three cases have been found by the author in which the median lobe was really or apparently affected, and yet in which no inco-ordination was observed; they are the following. 1. Crisp, *Transactions of the Pathological Society*, vol. xxiii; 2. Hughlings Jackson, *Medical Times and Gazette*, August 1, 1877; 3. Gintrac, *Traité des Maladies de l'Appareil Nerveux*, 1871, Bd. iv. Reasons are given at length by the author for considering that none of these cases affect the validity of the above proposition. Observations on cases (tuberculosis, etc.) occurring in very young children cannot be allowed to have much weight in this matter, as dis-

\* *Berliner Klinische Wochenschrift*, April 15th, 1878.

turbances of gait cannot be noted with any degree of accuracy in them.

It cannot yet be determined what part or parts of the median lobe must be affected in order to give rise to disturbances of co-ordination.

Inco-ordination has been noted as occurring in experiments made for the purpose of studying the functions of the cerebellum, not only in dogs and cats, but also in rabbits, guinea-pigs, and especially birds (Flourens). The cerebellar hemispheres are known to be less developed in the animal series the further they are removed from man; in rodents, the median lobe is very large compared with the lateral lobes, and the whole cerebellum of birds corresponds only to the median lobe in mammals. Therefore experiments upon the cerebellum of birds, together with their results, must be considered as having reference only to the median lobe of the human cerebellum.

Among diseases of the lateral lobes of the lesser brain it is found that tumours most frequently give rise to motor disturbances, owing to the pressure they exercise upon the median lobe. It may easily be understood why recent hæmorrhages do not cause these symptoms, for the patients either die comatose, or exhibit a series of other symptoms which prevent them from walking at all.

Dr. Nothnagel now proceeds to discuss several points connected with cerebellar ataxy. In the majority of fully developed cases there should be little difficulty in distinguishing between the gait of a tabic patient, and that of a person suffering from cerebellar disease. There are a number of cases, however, in which the distinctive features are less evident; this occurs most often in patients with cerebellar disease who present symptoms resembling those of tabes dorsalis. The gait of a person suffering from cerebellar ataxy is very similar to that of a drunken man. One of Nothnagel's patients has several times been locked up by the police as drunk, owing to his tabic gait.

It has been believed that cerebellar disease causes a special tendency to fall either backwards or forwards; the author shows that this symptom is oftener absent than not, and that some patients have a peculiar tendency to fall towards the right or the left. It would appear that this tendency to fall is usually in the direction in which the cerebellar lesion is situated; but many decided exceptions to this are on record, and it is impossible at present to substantiate any proposition on this part of the subject. The author's view is that a tendency to fall always in one particular direction is to be observed when either of the middle peduncles of the cerebellum is affected by disease. In many cases the uncertainty of gait is increased by being in the dark or by closing the eyes, while some patients find that this in no way affects them. The movements of the legs are, as a rule, perfectly well performed when the patient lies on his back in bed, the muscular sense seems then also to be unaffected; there are, however, exceptions to this. It is remarkable that in many cases, though motor disturbances of the legs and trunk are very marked, the upper extremities remain quite unaffected; no explanation of this is offered. The author promises before long to publish a monograph in which will be found full details of the cases, experiments, etc., which have led him to the conclusions given above.

CHAS. S. W. COBBOLD, M.D.

## CORNIL ON TUBERCLE OF SEROUS MEMBRANES AND SO-CALLED "GIANT-CELLS".

At the meeting of the Société de Biologie on March 16, 1878 (*Gazette Médicale de Paris*), M. Cornil made an interesting communication touching the nature of the giant-cell and its place in the pathology of tubercle. He described the appearances of the giant-cell when set free by agitating in dilute alcohol sections from tubercular pericarditis. Their substance is, M. Cornil remarked, homogeneous, containing fine granulations, which also penetrate into the fine processes proceeding from the body of the cell. On the addition of acetic acid, the cell becomes clear and swollen, its granules are effaced, and the nuclei become more clearly distinguishable. On treatment with picrocarmine, the substance of the giant-cell is rendered of an orange-yellow colour, whilst the nuclei are tinged red. The nuclei are ovoid, more or less elongated, and often have an appearance of buds on their surface, sometimes undergoing division. They are placed near the surface of the cell, a layer coming into view on first focussing the surface of the cell, and a second layer appearing on deepening the lens so as to focus its under surface. The number of nuclei varies from two to thirty, according to the size of the cell.

Referring to some sections from a case of tubercular pericarditis shown by M. Merklen at the last meeting of the Society, M. Cornil observed that these sections showed the inflamed tissue to be very vascular, and that the capillaries were much dilated, and contained at certain points fibrinous coagula adherent to the inner surface of the vessel. The wall of the capillary thus affected was well defined, and the epithelioid cells undisturbed. But above and below the coagulum the lumen of the vessel was occupied by lymphatic cells, which were abundant also in the connective tissue around. In other vessels, red corpuscles were collected above and below the coagula. In many other points of the preparations there could be seen the "giant-cell", with its prolongations, surrounded also by epithelioid cells, swollen or proliferating; but the wall of the vessel was not in these cases so clear as in the preceding, being more obscured by the presence of numerous small lymphatic cells infiltrated all around it. Nevertheless, the form of the section was that of a dilated and filled vessel. In other parts, more voluminous giant-cells, or groups of such cells, surrounded by epithelioid elements, were seen. The isolated tubercles of the pia mater were composed of small grains of an embryonic tissue which developed around the blood-vessels. The wall of the vessel, its lymphatic sheath, and the cellular tissue around it, were infiltrated with lymphatic cells. The lumen of the vessel in the centre of the small granulation thus constituted was always filled by a fibrinous clot, and, a remarkable but easily verified fact, this vessel was always swollen and its cavity dilated at the point where it was obstructed by the coagulum. Many transverse sections of tuberculous pia mater showed the arterioles to be affected with a distinct endarteritis. And, at the point of the endarteritis, a part or the whole of the lumen of the vessel was occupied by a coagulation purely fibrinous or granular, with lymphatic or epithelioid cells entangled in its periphery. These leucocytes penetrated into any fissures on the surface of the coagulum; the coagula coloured strongly with picrocarmine.

In the majority of instances, the wall of the vessel



was infiltrated with small cells, its lymphatic sheath filled with leucocytes, and the meshes of the connective tissue of the pia mater around the vessels thus altered presented a beautiful fibrinous reticulum enclosing leucocytes. In the older portions, the tissue became caseous and more compact. But nowhere outside the vessels did one see anything which could be called a "giant-cell". The process of formation of "giant-cells" took place entirely, so far as the pia mater was concerned, in the interior of the vessel cavity.

M. Cornil described similar appearances to be observed in tubercular granulations in the peritoneum, and observed, in conclusion: "It seems to us that the foregoing facts sufficiently demonstrate the intravascular origin of 'giant-cells', and that one may conceive them as having their origin in a special inflammation affecting a limited portion, and causing coagulation of fibrine. The accumulation of white globules and of some red corpuscles, the union and incorporation of the leucocytes into a fibrino-plastic mass, the nuclei of which hypertrophy, become ovoid and proliferated, and tumefaction of the epithelioid cells would be the phenomena observed in the interior of the vessels. The 'giant-cell' would have its origin in the coagulation of a fibrinous plasma, in which leucocytes have been entangled and blended, and would have proliferated in an unusual manner. Infiltration and softening of the vessel-wall, which after a time becomes no longer recognisable, and inflammation of the adjoining connective tissue where the nutritive juices accumulate, permit of considerable but short-lived nutritive activity to the cells in the centre of the little tubercular islets. We believe that we may consider the nests of the giant-cells and of the swollen cells as representing vessels of which the parietes and contents are modified by the special inflammation of tuberculosis."

In the debate which followed upon M. Cornil's paper, M. Malassez, whilst confirming the facts observed, expressed himself as unable to admit that the giant-cells were mere obliterations of vessels more or less changed. Obliteration of vessels was common in tubercle, but its characters were so different from those of the giant-cell, that it was impossible to admit of any relationship between them. M. Malassez's objections were (1) an entire want of numerical relationship between the divided obliterated vessels and the giant-cells; (2). Although the giant-cells like the vessels were often rounded, they often also presented numerous fine processes which could not possibly correspond with any ramifications of the vessel; (3). The size of the giant-cells sometimes exceeded the limits of the vessels; (4). The material obliterating vessels showed a fibrinous reticulum with changed corpuscles in the centre; the giant-cell, on the other hand, did not show this reticulum, its nuclei differed from those of white-corpuscles, and the elements of the cell were living and did not degenerate; (5). The wall of the vessel, always recognisable in obliterations of any considerable size, was never to be found surrounding the giant-cell. M. Malassez regarded the giant-cell as a form common to a certain number of different kinds of anatomical elements in process of normal or morbid development. He conjectured that in tubercle the giant-cells were vaso-formative, and that the central degeneration of tubercle was in part due to the nontransformation of these vaso-formative cells into vessels. Instead of being sections of obliterated vessels, M. Malassez regarded these

giant-cells as being very probably vaso formative cells which have become arrested in their development into vessels. R. DOUGLAS POWELL, M.D.

## CORNIL ON THE PATHOLOGY OF THE LYMPHATIC GLANDS.

M. CORNIL (*Journal des Connaissances Médicales*, Nos. 1 and 2, 1878) describes some interesting results of investigation.

ADENITIS OF SYPHILIS. 1. *Adenitis of the Primitive or Secondary Stage*.—Besides ordinary lymphatic cells he finds large cells, more or less spherical, containing many nuclei, of which a very large one generally contains two nucleoli. These large cells are much more numerous in the cavernous system than in the follicular tissue. According to M. Cornil they proceed probably from the flat cells which line the reticulum, cells analogous to the epithelioid cells of the fine meshes of the great epiploon. At the same time, there is a slight accentuation of the fine connective tracts which radiate diverging from the hilus to the periphery, and divide the organ into a dozen lobes with large peripheral extremity. Briefly, there are proliferation of the nuclei of the cells, and a slight degree of sclerosis.

2. *Adenitis of the Tertiary Stage*.—M. Cornil draws attention especially to a form in which the swollen glands constitute soft whitish masses of a medullary aspect. In these cases the change attacks solely the cavernous system, and all the lymphatic channels contained in the glands. The fine reticulate tissue or follicular tissue does not offer any notable alteration.

As to the cavernous substance it is gorged with round granular lymphatic cells, and, with these, large multinuclear cells.

There is here, so to speak, a catarrhal inflammation of the vessels and of the intraglandular lymphatics.

SCROFULOUS ADENITIS. Scrofulous gland-inflammations are especially characterised by the enormous development of connective tissue, and by the partial or total consecutive caseification of the glandular mass. At an early stage, one may see starting from the tube bands of connective tissue, in which run blood-vessels and some lymphatic vessels. From these principal partitions start secondary partitions, which bound islets hardly visible to the naked eye.

Gradually these islets, seen with a lens, assume a yellow tint. They are constituted by reticular tissue, but the fibrillæ are thickened, soft, granular, and form meshes larger than in the normal state. These meshes enclose large cells with granular protoplasm, provided with a voluminous nucleus having two nucleoli. Around these islets is a closely webbed membrane. It may be observed also to be constituted by reticular tissue, but the meshes are so elongated that the fibrillæ altogether affect the form of bundles concentric to the islet. They contain lymphatic cells with round or ovoid nuclei, smaller than those of the islet. There is here, then, a true cirrhosis of the glands, which occurs at the expense of the circumfollicular tissue, of the cavernous tissue of which no trace can any longer be found.

This lesion finally reaches complete fibrous transformation of the whole glandular mass, or, what is more usual, total caseification of the gland.

## SQUIBB ON HYDROBROMIC ACID.

DR. EDWARD, SQUIBB writes as follows on this remedy, in an article in the *Transactions of the New York State Medical Society*.

The acid is a sedative neurotic, and its principal uses, as developed up to this time, are as an occasional substitute or alternate for the bromides of potassium, sodium, and ammonium. It is well established that the bromine is the active medicinal agent whose influence is sought in the use of these salts. And it is also well known that the alkaline bases, and especially potassium, when given for a long time, are liable to enfeeble the muscular tissues, and produce other changes not desirable, through undue alkalinity of the blood and the secretions; and through the secretions to enfeeble the digestive and assimilative processes. It is true that the proportion of cases in which such effects come into undue prominence is small; but to correct them where they do occur, and to forestall them when likely to occur, without suspending the bromine, whose continuous sedative action is often very important, this acid now comes into use.

It is, however, certainly not well adapted to very prolonged use; for, like other so-called mineral acids, it would be very liable to interfere more with the normal processes of the economy than the bromine salts with alkaline bases. Therefore, for the present at least, it must be regarded simply as an alternate for the bromides, for occasional and exceptional, rather than for general use. Such uses are, however, very important in the treatment of chronic affections of the nervous system, even when neither functional nor organic mischief is observed or apprehended, for several reasons, among which the disgust which patients often acquire for salines when long continued is not the least. In hospitals for the insane, especially in the epileptic wards, it should be very useful, both in effect and in facility of administration, because it can be given in the form of lemonade, if moderate or small doses should prove effective.

It has been highly spoken of as a corrective and preventive remedy for the headache, ringing of the ears, and general cerebral distress, which often follows the use of salts of quinia, which should be called quinism, and not cinchonism. When given with, or after the salts of quinia, the disagreeable head-symptoms are said to be prevented. It should be remembered, however, that, as a general rule, some degree of this quinism is necessary to indicate the full power of quinia salts, and that, irrespectively of the full quantity given, the full influence as an antiperiodic is never assured without some degree of the head-symptoms, and that the dose required to produce the full antiperiodic effect varies very much in different individuals, and even in the same individual at different times. In those cases where small quantities of any of the salts of quinia produce head-symptoms of disproportionate severity, so that the desired benefit of the antiperiodic cannot be attained because the sufficient dose cannot be borne, this acid is said to be very useful, either given with the quinia salt, or later, when the head symptoms begin. It is also said to be useful in nervous headaches and tinnitus from other causes than the administration of quinia salts, and to be effective when given at any stage of the affection.

Other uses to which the acid has been applied with alleged advantage are not yet confirmed.

The acid is not very easily administered in full doses, in consequence of the large dilution necessary,

and the disagreeable effect of "setting the teeth on edge". A dose of fifty grains, equal to 41.66 minims, and to twenty-five grains of potassium bromide, requires not less than eight fluid ounces of solution. And the dilution must contain not less than an ounce of sugar, or two ounces of syrup, to make it easily drinkable. This will be found to be the principal drawback to the use of the acid, unless it shall be proved to be effective in smaller quantities than its equivalence to the bromides indicates. And this effectiveness in much smaller doses is not only probable, but almost certain, if the experience of Fothergill and others may be trusted, since they give it in doses of one-eighth to one-fourth of those here indicated as being the bromine equivalent of potassium bromide. That is to say, the doses advised by those who appear to have used it with the best effects, are equivalent to about six to eight grains of potassium bromide. This published experience would make the average dose of the acid here described, about twelve to sixteen grains, or the bromine equivalent of only six to eight grains of potassium bromide. In the very limited experience of physicians around the writer these doses are too small, and twenty to thirty grains, equal to ten to fifteen grains of potassium bromide, are needed for a prompt sedative effect, while forty to fifty grain doses are not uncommon. And such doses have to be repeated at times in controlling the headache, etc., of quinism. Even such doses require a dilution of two to four fluid ounces of water, for easy administration.

## ANATOMY AND PHYSIOLOGY.

VON VINTSCHGAU AND HÖNIGSCHMID ON THE RELATION OF THE GLOSSO-PHARYNGEAL NERVE TO THE TASTE-GOBLETS.—M. von Vintschgau and J. Hönigschmid (*Pflieder's Archiv*) in order to investigate whether the glosso-pharyngeal nerve which supplies the mucous membrane of the posterior third of the tongue actually ends in the taste-bulbs, excised a short piece of the nerve from half-grown rabbits. After five months, when the animals had grown considerably, they found that on the side on which the nerve was divided the taste-goblets had completely disappeared, and in place of them was found ordinary squamous epithelium. This would seem to show the direct relation between this nerve and these bodies.

DROSDOFF ON THE ABSORPTION OF PEPTONE AND CANE-SUGAR FROM THE INTESTINAL CANAL.

—W. Drosdoff's observations on this subject are given in the *Zeitschrift für Phys. Chemie*, Band I, p. 216.

1. *Peptone*.—That the peptones formed during digestion, on account of their solubility and diffusibility, easily pass from the intestinal canal into the portal blood, is generally accepted, but has not yet been proved. The author made five experiments on dogs after feeding them with flesh. The blood was obtained from the portal vein by puncture. The tests employed were the well known reaction of peptone with acetic acid and ferrocyanide of potassium (a precipitate indicates albumen), caustic soda and sulphate of copper, corrosive sublimate and alcohol. In all cases peptone was found in the portal blood, though often only in traces. If the blood was tested



at once, it contained more peptone than when it had stood some time before being precipitated with alcohol. It would therefore appear that the blood can change chemically a part of the peptone.

2. *Cane-Sugar*.—For the investigation of cane-sugar, an alcoholic extract of the portal blood was made, which was then evaporated and dissolved in water. The quantity of sugar present was estimated by trituration with Fehling's solution. The amount of sugar in the stomach was also estimated. A considerable quantity of cane-sugar was regularly found in the portal blood, thus agreeing with the results of Claude Bernard. When the blood was exposed to the air, the cane-sugar diminished gradually. After several days, the amount of sugar falls to a minimum (as had been shown previously by Claude Bernard for grape-sugar).

GRÜTZNER ON THE SECRETION OF URINE.—Ustimowitsch, under Ludwig's direction, had shown that in the dog, when the blood-pressure had fallen so low that no secretion of urine could have taken place, a copious secretion of urine followed the injection of urea into the blood. P. Grützner (*Pflüger's Archiv*, Band xi, p. 370) wished to ascertain if changes in the blood-pressure always caused simultaneous changes in the secretion of urine. The blood-pressure in rabbits and dogs was lowered by section of the cord in the neck; the blood-pressure sank from 120 millimetres of mercury to 30 millimetres, and the secretion of urine, as Eckhard had shown, ceased almost entirely. On injecting into the blood various diuretic agents (urea, nitrate of soda), the blood-pressure rose slightly, and the kidneys began to secrete at a pressure at which formerly no secretion was observable. The kidneys showed the same results when the blood-pressure was lowered by large doses of curara or chloral.

The blood-pressure was raised by electrical stimulation of the medulla or by stoppage of the respiration (carbonic acid in blood). In both cases, when the stimulation was begun, the secretion stopped completely, even when diuretic substances were present in the blood. The increase of the blood-pressure brought about in this way and depending on a general stimulation of the vaso-motor nerves, causes, as direct observation of the kidney shows, a decrease of the blood-pressure in the glomeruli, and thus explains the cessation of the secretion in spite of the general increase of the blood-pressure. When the blood-pressure in the glomeruli themselves was raised after destruction of the vaso-motor centres of the kidney, copious secretion took place on the side on which the vaso-motors were divided, whilst on the other side the secretion was slight, the vaso-motor nerves of the kidney not being divided. It seems, therefore, that diuretic agents, in addition to their action on the blood-pressure, have also a specific action, which requires further investigation. When the blood-pressure is raised after an injection of infusion of digitalis, the secretion of urine ceases both in the kidney of the sound side and in the other with its nerves destroyed. The author explains this by supposing that digitalis produces a contraction of the vessels of the kidney independent of the vaso-motor centre, which, according to the above experiments, must lead to cessation of the excretion of urine. Strychnine has an action in this respect similar to digitalis. Digitalis and strychnine have no direct action on the secretory elements of the kidney, for in the second stage of their action, when the spasm of the vessels has subsided, but whilst the blood-pressure is still

much above the normal, copious diuresis occurs. It is different with regard to urea, nitrate of soda, etc., which seem to have a specific action on the

COUTY AND CHARPENTIER ON THE EFFECTS ON THE CIRCULATION OF STIMULATION OF SENSORY NERVES.—L. Couty and A. Charpentier (*Arch. de Physiol.*, p. 525, 1877) experimented on curarised dogs. The nerves of special sense, sight, hearing, taste, and smell were excited by a great variety of stimuli. The variations in the blood-pressure were measured in the usual way with the kymograph. The following were the results obtained. Each individual sensory apparatus was stimulated by different agents (aloes, colocynth, acetic acid, different essences, whistling, noises produced by metals, barking of another dog, diffuse daylight). All these stimuli produced disturbances of the heart's action, whose intensity resembled those produced by other peripheral stimuli, but differed in their *variability*. With regard to the effect thus produced, consecutive sensory disturbances varied with each individual animal, and according to the conditions of the experiment, for each individual animal according to the special sense acted on, and for each organ of special sense, with the nature, strength, and duration of the stimulus. The disturbances were often very different, both in the same and in different animals; there might be either acceleration or retardation of the heart, rise or fall of the blood-pressure. There was no relation between the kind of stimulus, the consequent stimulation, and the effect on the heart and vessels.

It was shown that in these reflex processes, produced through the nerves of special sense, the cardiac phenomena were independent of the blood-pressure, and the impulses were conducted only through the vagi. The presence of the brain is indispensable for the occurrence of the phenomena connected with the heart and with the blood-vessels. Therein the disturbances of the circulation produced by stimulation of the nerves of special sense are distinguished from those produced by ordinary peripheral stimulation, and from those which proceed from the corpora quadrigemina and cord. The reflex effect on the heart and vessels is not connected with the perception of the sense-organs, but with the activity of the centre, the brain. This function of the brain varies much, even with the same stimulus. Stimulation of a nerve of special sense would seem therefore only to affect the heart and vessels when it is perceived by the central organ.

W. STIRLING, D.Sc., M.D.

FRANCK ON THE VERTEBRAL NERVE.—M. Franck (*Société de Biologie*, April 27, 1878) presented to this Society the first results of his researches in comparative anatomy, and vivisections tending to establish that those fibres of the first thoracic ganglion which accompany the vertebral artery in the vertebral canal are not merely efferent branches of that ganglion, but also and above all *cervical roots* of the thoracic trunk of the sympathetic. Of the two fibres which are given off from the superior extremity of the first thoracic ganglion, one, the external, anastomoses with the next cervical mixed nerve; the other, internal, unites successively with the cervical nerves from above down to the third inclusively, sometimes also to the fourth. It is by these anastomotic threads that the cord furnishes sympathetic roots to the first thoracic ganglion. In operating upon the two united branches of the vertebral nerve between the neck of first rib and the transverse process of the last but

one cervical vertebra, M. Franck obtained modifications in the beat of the heart and in the hepatic circulation.

Excitation of the ganglionic end of the vertebral nerve, well isolated, produces acceleration of the cardiac beat, which permits the assimilation of this nerve to the dorsal roots of the first thoracic ganglion, which furnish, as we know, accelerating cardiac nerves. These nerves come there equally from the cervical cord and the vertebral nerve. Thus may be explained the experiments of Von Bezold, who found that acceleration of the heart followed excitation of the lower end of the cord divided in the inferior cervical region. The excitation of the superior end of the vertebral nerve determines, like excitation of the cervical sympathetic, but to a less degree, dilatation of the pupil. M. A. Voisin has already inferred that all the pupillary fibres do not accompany the cervical sympathetic cord, but that some follow the vertebral artery. Experiment shows that this is so. Besides the effect on the pupils, excitation of the upper extremity of the vertebral nerve causes modifications in the intracranial circulation, to be fully discussed in a future communication. These experiments show that there are in the nerves which accompany the vertebral artery ascending fibres and descending fibres.

Another effect produced by section of the vertebral nerve, and to which attention has been already drawn by Dr. Pavy, and by MM. Cyon and Aladoff, is the production of diabetes. This result of the section of these fibres which accompany the vertebral artery has been opposed by M. Eckhard, and was not observed by M. Vulpian. M. Franck has repeated his experiments, and has found, after section of the nerve, the urine sometimes loaded with sugar, sometimes completely normal; variations which explain the differences between the above-mentioned physiologists. But if, instead of seeking sugar in the urine, comparative analyses of the blood be made before any operation, after the exposure of the nerve, and after its section, the increase of sugar in the blood after the section of the nerve can be assured; if the augmentation be sufficient, it passes into the urine; it does not pass if the proportion do not reach the figure indicated by Claude Bernard, that is, .03 per cent. in the arterial blood. There is always hyperglycæmia, sometimes glycosuria. He proposes provisionally the following explanation of the appearance of sugar in the blood after this operation. The section of the vertebral nerve interrupts the continuity of a certain number of vaso-motor nerves destined for the branches of the vessels of the liver, and coming from the cervical spinal cord. This hypothesis rests upon the following experiments. If the cannula of a manometer filled with serum, to which sodium-sulphate has been added, be introduced into the visceral end of the hepatic artery, and the nervous plexus accompanying the vessel be excited, the level of liquid in the free branch of the manometer rises, there is produced a vascular contraction within the liver. If the experiment be repeated, but the lower end of the vertebral nerve be excited instead of the hepatic plexus, the same phenomena occur, elevation of pressure in the manometer, contraction of the hepatic vessels. The vertebral nerve seems, therefore, to contain vaso-motor fibres running to the liver. M. Franck believes that the hyperglycæmia found after division of the nerve depends solely upon a more complete flushing of the liver, thus carrying away more sugar into the circulation.

R. SAUNDBY, M.D.

ARLOING AND TRIPIER ON THE PHYSIOLOGY OF THE VAGUS NERVES.—The following are the principal facts set forth by the authors (*Annales Médico-Psychologiques*).

1. Section of the spinal cord behind the bulb diminishes considerably the excitability of the pneumogastric nerve.

2. There is a notable difference between the two vagi, chiefly from the functional point of view; the right acts more energetically upon the heart than the left.

3. The reciprocity permits the mechanical phenomena of respiration. Excitation of the left nerve modifies more deeply the movements of the thorax than that of the right nerve.

4. The arrest of the heart is more complete when the galvanisation is direct.

5. The movements of the heart which are produced during galvanisation of the vagi are more feeble than before the excitation.

6. It is impossible to resume in a general formula the influence of galvanisation of the pneumogastrics upon the respiration.

7. Galvanisation at the peripheral ends makes itself felt on the respiratory movements, probably because the vagi send recurrent fibres reciprocally to the periphery.

8. Section of a vagus is followed by weakness of the movements of the chest-wall of the corresponding side.

9. Finally, it does not appear to us that one of the vagi is more particularly concerned in digestion than the other.

C. ALDRIDGE, M.D.

#### RECENT PAPERS.

Some Reflections on Comparative Physiology. By M. G. Cartet. (*Revue Internationale des Sciences*, May 16.)

#### PATHOLOGY.

PARROT ON SOFTENING OF THE BRAIN IN NEW-BORN CHILDREN.—From extended observations, the following conclusions have been arrived at by M. Parrot (*Annales Médico-Psychologiques*).

1. The brain of the newly born is normally of an exceedingly soft character, because of the open nature of the reticulum, and the small proportion which the nervous elements bear to the other components of the structure.

2. Thus predisposed, it resoftens very easily during life under certain pathological influences; and, after death, by the effect of purely physical causes.

3. The cadaveric softening sets up a penetrating odour of sulphuretted hydrogen, and small spots of a greyish appearance are found full of vibriones. These conditions are usually the consequences of a deferred necropsy, and an elevated temperature.

4. The pathological softening presents itself under two main forms: *a*. The white softening from many points, constituting the ultimate period of cerebral fatty degeneration, and having for its seat almost exclusively the centres of the hemispheres; *b*. The red softening, which invades the same regions, but in a more extended manner, and is accompanied by hæmorrhage of the lymphatic sheath, with frequent rupture of that sheath.

5. These two kinds of softening, ordinarily separate, may be found united in the same subject. Other lesions frequently exist with the above, and



are often intimately related to them. Such are: *a*, intracranial—consisting of old coagulations in the sinuses and veins of the pia mater; yellowish exudations, subarachnoid and surrounding the vein, of leucocytes, and of protein-granules; and *b*, affections of the blood and of various viscera, amongst which those of the digestive tube hold an important place.

6. In the greater number of patients the encephalic disturbances observed during life cannot be connected with it, and in no case could one with certainty diagnose it.

7. Cerebral softening may be observed with all its characteristics, in the newly born, in the fœtus, or in the child a few months old; but, in the latter, its commencement goes back to some date very near birth.

8. When the lesion is old and considerable, it might determine: *a*. A secondary degeneration of the pons Varolii, medulla oblongata, and spinal cord; or *b*. An intracranial dropsy, with or without hydrocephalic development of the cranium.

9. Encephalic softening is very frequent at the two extremes of life; and it presents three incontestable differences; from the point of view of the lesion, the mechanism, and the symptoms, its first cause might be the same, and consist in the newly born, as in the aged, in a decay of nutrition.

CHARLES ALDRIDGE, M.D.

PETERSSON ON A CASE OF EMBOLISM OF THE PULMONARY ARTERY.—Dr. O. V. Petersson relates the following case in the thirteenth volume of the *Upsala Läkareförenings Förhållingar* (abstract in *Nordiskt Medicin. Arkiv*, Band x, Häft 1).

A woman, aged 56, had a fall in the beginning of March 1877. In consequence of this, besides a slight excoriation of the left hand, and pain in the left leg on walking and standing, she had a fixed pain in the left groin. Along the whole course of the saphena vein of the same limb considerable varices were formed, the skin over the subinguinal fossa was red and tender, and at this part a hard cord was felt lying deeply. Mercurial ointment was rubbed into the affected parts, and warm moist applications were used: rest and morphia were prescribed. After some days, a hard knotty mass, red and painful, was observed at the inner side of the knee and leg. On March 20th the patient, in spite of prohibition, walked across her room to a sofa. The pain in the leg thereupon became violent; notwithstanding, the patient walked back to her bed. She had scarcely time to lie down before she was attacked with violent dyspnoea and oppression in the chest, and became unconscious. Her face immediately became cyanotic; her respiration was stertorous; the pulse was scarcely perceptible, and she died thirty minutes after the commencement of the paroxysm.

At the *post mortem* examination the left saphena vein, along nearly its whole course, was found to be the seat of saccular projections of greater or less size, which in the leg were filled with dark red coagula, while in the thigh and in the fossa ovalis greyish red thrombotic plugs were found. At the opening into the femoral vein was a dilatation of the size of a walnut, filled with a thrombus, a small portion of which extended into the femoral vein. A large branch of the right pulmonary artery was found to be completely blocked up by an embolon an inch long; externally it was reddish grey and firm, internally, dark red and of loose consistence. In the left lung the principal branch of the pulmonary artery

was in like manner occluded by an embolon two inches long, loosely connected to the lining membrane of the artery, and of the same appearance and consistence as the other. The heart was externally loaded with fat, and its muscular tissue was lax and brittle. The subpericardial fat was prolonged between the muscular structure, and the tissue of the right ventricle presented fatty degeneration on microscopic examination.

A. HENRY, M.D.

LANDOUZY ON THE PATHOLOGY OF MUSCULAR ATROPHY.—Dr. Landouzy, in a remarkable article in the *Revue Mensuelle*, Jan. 1878, points out that, in most cases of secondary amyotrophy, there may at the same time be observed a trophic affection of the integuments superposed on the atrophied muscles; the conditions observed being a notable thickening of the cellular tissue adherent to the skin, in such wise that the tegumentary folds formed by pinching it up above the atrophied muscles, very often present a thickness double that of the normal. This tegumentary thickening, corresponding to the regions attacked by muscular emaciation, appears to exist—*a*, habitually in deuteropathic amyotrophy; *b*, rarely in amyotrophy of the type described by Aran and Duchenne; *c*, in a variable degree in the atrophy of infantile paralysis. This subcutaneous fact it is important to note; clinically, because it lessens and marks the appearance of muscular atrophy; because, in certain cases of difficult diagnosis, it may serve to determine the variety of atrophy; from the point of view of physiological pathology, because it seems to present itself with the character of a true trophic disorder, not being found in the cases of hysterical patients condemned to prolonged immobility by hysterical hemiplegia or paraplegia, any more than in patients suffering from progressive amyotrophy.

BROWN-SÉQUARD ON TROPHIC DISTURBANCES.—M. Brown-Séquard (*Société de Biologie*, 27 Avril) has observed in many guinea-pigs whose sciatic nerves he had divided, various phenomena hitherto not recorded; extreme agitation, cries, staggering, temporary cataleptic rigidity; besides, in all, the characters of spinal epilepsy were very accentuated and persisted, while the first symptoms, which might be attributed to a spinal meningitis, disappeared more or less rapidly. In one of these animals, the paw of the side opposite to the lesion was still at that time the seat of a notable atrophy; whilst that of the side on which the nerve was cut was intact. This fact pleads against the accepted theory of trophic disturbance. Moreover, M. Brown-Séquard has for a long time maintained that the so-called trophic disturbances are often due to the animal biting its paw in the convulsive attacks.—M. Laborde objected to this view, and related a case in which this occurred to a rabbit, although every precaution was taken to prevent it from biting itself.

ROBERT SAUNDBY, M.D.

#### RECENT PAPERS.

- The Origin of Fibrinous Cylinders in the Urine, and on Parenchymatous Inflammation. By Dr. E. Aufrecht. (*Centralblatt für die Medicin. Wissenschaften*, May 11.)  
 Note on the General Anatomy of Enderteritis. By M. J. Renaut. (*Gazette Médicale de Paris*, May 11.)  
 The Germ-Theory and its Applications to Medicine and Surgery. By MM. Pasteur, Joubert, and Chamberlaud. (*Ibid.*)

## MEDICINE.

**KITTLER ON PARALYTIC DISORDERS OF THE VOICE IN PHTHISIS.**—Dr. Kittler has a paper on the above subject in the *Aerztliches Intelligenzblatt* for May 28. He observes that, since the introduction of the laryngoscope, paralytic affections of the laryngeal nerves and muscles have assumed an important position, so that many cases of hoarseness, aphonia, etc., formerly attributed to anatomical lesions, are now shown to be purely paralytic. The present paper considers mainly the forms of vocal paresis and paralysis attending phthisis. These may either precede the lung-disease, or may develop themselves during its progress.

In the former case, vocal paralysis manifests itself chiefly in functional weakness of the organ, want of clearness, and loss of voice on slight exertion, as speaking or singing, also hoarseness after a slight cold. This condition of things, termed by Gerhardt (Virchow's *Archiv*, vol. xxvii, pp. 68 and 296) atony of the vocal cords, may precede phthisis for months, and even years. The results of laryngoscopic examination in cases of this kind are various. Sometimes they are almost negative; at other times, especially after a continued effort of the voice, there is some injection and swelling of the vocal cords, or of the arytenoid mucous membrane. Sometimes, again, a highly anæmic condition of the mucous membrane is all that can be discerned; and lastly, in some cases the impairment of the voice can be shown to be due to diminished mobility of the cords and defective closure of the rima glottidis. The grave import of these apparently insignificant changes is only indicated by a history of phthisis in one or both parents. The true nature of a case of vocal atony, hitherto attributed to over-exertion of the voice, is often revealed by the sudden accession of hæmoptysis or colliquative sweating, indicating the latent pulmonary disease. On the other hand, we cannot, in the absence of a history of phthisis, regard vocal atony, even of the most obstinate kind, as seen in singers, actors, etc., as a forerunner of phthisis.

Vocal paralysis, occurring in the progress of phthisis, may be of two kinds—either combined with lesion of the mucous membrane or with the mucous membrane intact. The most frequent sources of the former are catarrh and ulceration. Although inflammatory swelling of the mucous membrane is in itself sufficient to produce intense hoarseness, yet in these cases we must consider the impairment of the voice due rather to a paralysis of the laryngeal muscles, in consequence of serous infiltration of the muscular fibres, than to the catarrhal affection, which is often indeed very slight. The paralysis is mostly double, and affects chiefly the muscles that close the glottis, and those that regulate the tension of the cords. The site of ulceration, when this is present, has considerable influence on the form of paralysis; thus ulceration of the posterior wall usually impairs the action of the transverse arytenoid muscle. Paralysis of the muscles that open the glottis is very rare in cases of phthisis.

Paralysis of the vocal apparatus, without concomitant lesion of the mucous membrane, may also be either double or unilateral, and may be considered functional. When occurring in tuberculosis, as also in chlorosis, it is probably due to the deficiency of red corpuscles in the blood, and a consequent impaired nutrition of the brain and the laryngeal

nerves; or it may also be due to reflex irritation of the peripheral fibres of the vagus, either in the infiltrated lung-tissue or on the surface of the almost always adherent pleura. Fränkel (Virchow's *Archiv*, vol. lxi, p. 261) has demonstrated degenerative changes in the laryngeal muscles, which throw considerable light on the nature of phthisical atony of the vocal cords. The primitive fibrillæ become wasted and more or less detached from the investing sarcolemma, or they may disappear in places almost entirely, leaving only empty sarcolemma tubes. The investing perimysium may also undergo change, either through excessive growth of its connective tissue or increase of its cellular element. This functional paralysis in phthisis most frequently affects the tensor muscles of the glottis, also the closers and the muscles attached to the posterior wall, and is often associated with hyperæsthesia of the mucous membrane and soft parts surrounding the larynx.

More rare than the above forms, is paralysis induced by pressure on the recurrent laryngeal nerve, caused by pleuritic exudation, by cicatrices, or by degenerated bronchial glands. Gerhardt estimates one case of paralysis of the vocal cords to twelve of ulceration; and Ziemssen regards this as even too high. When due to impaired nervous function, the affection is mostly right-sided, though cases on the left side have been observed, while paralysis of both recurrences is exceedingly rare.

Dr. Kittler appends two illustrative cases—one a case of complete paralysis of the right recurrent and paresis on the left side, due to pressure of an aneurism of the innominate and aorta; the other a case of double paralysis of the recurrent nerve, in a strumous subject with goitre.

W. J. TREUTLER, M.B.

**LANGE ON PARAPLEGIA FROM COLD.**—In a paper on *Paraplegia a frigore* in the *Hospitals-Tidende*, second series, Band iv, 1877, Dr. Lange says that he does not mean by the term those chronic spinal paralyses which may be produced by the frequently repeated action of cold and moisture, but those which arise from a single powerful influence, which may be acute in their development, and, as a rule, reach their maximum intensity in an early stage. Nor does he include the cases of spinal paralysis following a cold, which from the first are dependent on a well-marked myelitic process, either acute softening or abscess. The affections which he describes are at first not dependent on changes in the spinal cord, though such may occur at a later period. The course of the malady, according to the author's experience, is as follows. A short time, generally a day or two after exposure to the influence of cold, there is weakness in the legs, but not so great as to prevent walking. There is no disturbance of urination or of defæcation. Simultaneously with or before the paresis there may be pain or perverted sensations in the lower limbs and back; there may also be anæsthesia or hyperæsthesia. The general health is good; there is no spinal pain nor tenderness. The disorder generally remains at the same point about a fortnight. Under appropriate regimen and treatment it then begins to improve, and the patient recovers after an interval of two or three months. During convalescence, and for some time afterwards, over-exertion, or the renewed influence of cold, will easily cause a relapse, which, as a rule, is only temporary. Sometimes the arms also become affected, or the paresis increases, and will not yield to treatment, indicating the presence of more profound changes of a myelitic



character in the spinal cord. With regard to the pathology of this affection, the author considers that, if it be not from the first an inflammation, it is a change which may be developed into inflammation, perhaps a hyperæmia excited by a peripheral ischæmia. The prognosis is good when the patient can be kept in favourable circumstances. In addition, Dr. Lange recommends in quite recent cases (which none of his were) local blood-letting, afterwards douches along the spinal column, and the free application of tincture of iodine. As internal remedies, he uses iodide of potassium, nitrate of silver, or ergot.

A. HENRY, M.D.

**DONKIN ON HIGH TEMPERATURES DURING AND AFTER CONVALESCENCE FROM ENTERIC FEVER.**—In the *Lancet*, May 1878, p. 678, Dr. Donkin records a case where a young nurse, aged 19, was under observation from January 13th until April 25th, during which period she passed through an attack of typhoid fever, the remarkable point of her illness being the occasional high temperatures, that lasted for only a short period, and reached in the axilla  $108^{\circ}$  to  $110^{\circ}$ , while, shortly afterwards, the temperature in the mouth as well as in the axilla registered only  $97^{\circ}$  to  $96^{\circ}$ . On February 2nd, at 2 A.M.,  $110^{\circ}$  was registered, falling rapidly to  $102^{\circ}$ ,  $100^{\circ}$ ,  $99^{\circ}$ , and  $98.5^{\circ}$ . In the next hour  $104^{\circ}$  was noted, and on February 3rd, at 5 P.M.,  $109.6^{\circ}$ . Temperatures as high as  $105^{\circ}$  and over were registered, every evening, till the 15th;  $108.6^{\circ}$ ,  $109^{\circ}$ ,  $107.6^{\circ}$ ,  $107.2^{\circ}$ ,  $109.6^{\circ}$ . On the 19th there was an early morning temperature of  $109.4^{\circ}$ . Without following the case, which is reported in detail, it may be interesting to compare it with Dr. Sellaerbeck's apparently analogous case, reported in the *Berliner Klinische Wochenschrift* for January (see LONDON MEDICAL RECORD, March 15, p. 114).

**GREEN ON A CASE OF AORTITIS.**—Acute inflammation of the aorta is presumably rare, as few notices of the disease occur in the various text books. Mr. Green records in the *Lancet*, May 1878, p. 642, a case that occurred in a lunatic aged 45, who was admitted into the East Riding Asylum May 4, 1877, with slight paralysis of the lower extremities and convulsions. On June 6th, he had a fainting fit, leaving him more paralysed on recovery; on the 14th he had another attack, from which he did not rally, dying on the 17th. Two days before death, auscultation revealed no morbid sounds in the heart or aorta. A *post mortem* examination revealed intense inflammation of the aorta in its whole length, the redness gradually fading off towards the bifurcation. The innominate was equally inflamed, but the carotid and subclavian were inflamed for about an inch only. On laying open all the vessels, a fibrinous layer as thick as paper, and decidedly tough, was found lining them, to the same extent as the redness extended.

[A paper of some length, by E. Leudet, with a record of cases then published, may be found in the *Archives Générales de Médecine*, March 1861, p. 575, wherein the author arrives at the following conclusions. 1. Inflammation of the coats of the aorta gives place in some rare cases to the formation of an abscess. 2. This purulent collection is situated in the external cellular and middle coats. 3. It does not determine the alteration of the internal membrane of the coagulation of the blood, or of pseudo-membranous deposits on the surface. 4. The abscess of the aortic coats sometimes opens into the vessel, giving rise to the last pyæmic infection. —*Rep.*]

**TREATMENT OF CHRONIC ALCOHOLISM.**—In reply to a question by a correspondent in the *British Medical Journal* for May 4, p. 669, regarding the best treatment for the tremors of chronic alcoholism, and a substitute for the constant craving for drink which exists, Dr. Lauder Brunton recommends fifteen minims of tincture of perchloride of iron, with ten minims of tincture of nux vomica, as most efficacious for the tremors, combined with bromide of potassium if restless at night. The chalybeate mixture, either alone or with the addition of tincture of capsicum (five or ten minims), relieves the craving for drink, for which purpose also a mixture of carbonate of ammonia in infusion of gentian is valuable. If there be derangement of the stomach, it should be treated by ten-grain doses of subnitrate or carbonate of bismuth, with magnesia and tragacanth.

**SPENDER ON STRAPPING THE CHEST IN THE TREATMENT OF CHRONIC PULMONARY CONSUMPTION.**—Dr. F. T. Roberts's original recommendation of this mode of treatment is illustrated by a case in the *British Medical Journal*, April 27, 1878, p. 599, reported by Dr. Spender. Although seen during the last stage, when all treatment was utterly hopeless, still the patient derived great comfort and relief by the firm application of strips of soap-plaster, overlapping one another, from three inches below the clavicle in front to halfway down the chest behind.

RICHARD NEALE, M.D.

**PERROUD ON IMMOBILISATION OF THE THORAX IN PLEURISY.**—Dr. Perroud of Lyons (*Lyon Médical*) confirms from his own practice the value of Dr. F. T. Roberts's method of immobilising the walls of the chest in pleurisy by bands of diachylon, strengthened if necessary by a plaster-bandage. It is especially indicated in pleurisy and in pneumonia at the outset, and where the element of pain is prominent. This treatment was employed in a dozen cases of children attacked with pleuritic effusion of from four to six days date, and a moderate quantity of fluid was followed by speedy improvement, the fluid being absorbed in three or four days. Niemeyer has suggested that blisters may act in pleurisy simply by inducing immobility of the chest-wall. Perroud observes that Dr. Roberts's method is more direct and safer.

#### RECENT PAPERS.

- Researches on Local Morbid Temperatures. By Dr. Peter. (*La France Médicale*, May 4.)
- Meningitis and Death in a Patient suffering from Double Coxalgia. By M. Verneuil. (*Gazette des Hôpitaux*, May 23.)
- Thoracentesis. By Dr. Brochon. (*Ibid.*, May 18.)
- Two Cases of Parotiditis. By M. Merklen. (*La France Médicale*, May 18.)
- Cancer of the Left Breast: Secondary Cancer of the Right Lung: Right Pleurisy. By Dr. Cuffer. (*Ibid.*, May 11.)
- Case of Generalised Anæsthesia and Analgesia in an Epileptic Patient. By M. P. Meynet. (*Lyon Médical*, May 19.)
- On the Action of Magnetism and Static Electricity on Hysterical Hemianæsthesia. By Dr. Romain Vigouroux. (*Gazette Médicale de Paris*, May 4.)
- On a Case of Anæmia observed with the Hæmacytometer. By Dr. W. R. Gowers. (*The Lancet*, May 11.)
- On Myxœdema. By Dr. W. Ord. (*Brit. Medical Journal*, May 11.)
- Clinical Study on Urinary Tuberculosis. By Dr. A. Tapret. (*Archives Générales de Médecine*, May 1878.)
- Identity of Variola and Varicella. By Dr. Monseils. (*Montpellier Médical*, April 1878.)
- Alternating Paralysis. By Dr. Grasset. (*Ibid.*)
- On the Value of Aphonic Pectoriloquy in the Diagnosis of the Nature of Pleuritic Effusions. By Dr. Tripiet. (*Lyon Médical*, May 5.)
- On Atrophic Parenchymatous Hepatitis. By Dr. A. Testi. (*Lo Sperimentale*, April.)
- On Hemianæsthesia. By Dr. F. Müller. (*Berliner Klin. Wochenschrift*, May 20 and 27.)
- On the Phenomena of Sound in the Peripheral Arteries, with Observations on Auscultation by Solid and Hollow Stethoscopes. By Dr. H. Senator. (*Ibid.*, May 27.)

Case of Intestinal Obstruction cured by a Gaseous Injection. By M. Aribaud. (*Lyon Medical*, May 26.)  
 The Relation of Dyspepsias to Constitutional Diseases. By Dr. Cornillon of Vichy. (*Le Progrès Medical*, May 25.)  
 A Case of Perforating Ulcer of the (Œsophagus in Scarlatinal Sore-Throat. By Dr. L. Brezina. *Medicinische-Chirurgisches Centralblatt*, May 17.)

## SURGERY.

SCHINZINGER ON NECROSIS AND CARIES OF THE OS CALCIS.—Professor Schinzinger of Freiburg (Baden), reports in Von Langenbeck's *Archiv für Klinische Chirurgie*, Band xxii, Heft 2, four cases of central necrosis of the os calcis. In some remarks on the pathology and treatment of the morbid results of ostitis affecting the calcaneum, the author points out that there is a special tendency for this bone to become inflamed independently of other bones of the tarsus. It is larger than any other tarsal bone, and takes the largest share in bearing the weight of the body. According to Hueter, the developmental processes which go on in the talo-tarsal joint from birth to the period of completed growth, are of considerable pathological and clinical interest. In consequence of pressure on this bone during standing and locomotion, the vertical growth may be arrested, and during life the anterior calcanean process becomes more and more depressed. The constant traction of the tendo Achillis on the posterior surface of the bone, and the results of injuries, such as contusion in cases of sprained ankle, and concussion in attempts at active leaping, are all likely to set up inflammatory irritation in the succulent and spongy tissue of the calcaneum. Disease of the os calcis, when attacking healthy adults as a result of injury, usually remains restricted to this bone, and does not spread to other osseous parts of the foot. On the other hand, in cases of scrofulous disease of the tarsus, the os calcis presents a remarkable immunity. It must be well known to all practical surgeons, the author remarks, that the body of this bone is almost invariably found sound in such cases, even when all the other osseous portions of the foot have been thoroughly disorganised by caries. This clinical fact is of some importance with respect to the determination of the method of amputation for Schede, Pirogoff's method may be applied with good prospect of success even in those rare cases of disease of the tarsus in which the calcaneum has become involved, for here the anterior portion of the bone only, and never the posterior portion, is affected with caries.

With regard to the relative frequency of caries and necrosis of the calcaneum, there is much difference of opinion amongst German and French surgeons. The author seems disposed to hold that these cannot be considered as rare affections. Ollier has reported that, in the course of sixteen years, he saw more than one hundred cases of suppurating ostitis of the calcaneum alone. According to Kocher, the calcaneum is frequently affected by acute osteomyelitis, and is by no means unfrequently the seat of chronic inflammation. Out of fifty-two cases of caries of the tarsal bones reported by Czerny, the calcaneum was affected in thirteen.

The author, in referring to treatment of ostitis of the calcaneum, states that in recent cases of traumatic origin the inflammatory symptoms should be combated with ice and repeated local bleeding. The surgeon has, however, more frequently to deal with

the morbid results of inflammation, viz., caries and necrosis. Here his chief object should be to prevent extension of the disease. Whilst in some cases primary ostitis, an osteo-myelitic focus, or central necrosis, may be restricted to the calcaneum for months and even for years, there are, on the other hand, cases in which the calcanean disease finally gives rise to fungous synovitis of the nearest articulation. In the treatment of caries of the calcaneum and of other bones of the foot, Kocher recommends ignipuncture, or the repeated introduction into the bone of a pointed actual cautery, by which the diseased parts are thoroughly destroyed, their seat being subsequently occupied by a new growth of scar-tissue. Dr. Schinzinger is in favour of this method of ignipuncture, and mentions three cases in which he applied it with success. In two cases of children, one five, the other seven years old, long-standing fungous ostitis of a metatarsal bone was speedily removed. In the third case, that of a feeble man aged seventy, suffering from caries of the fifth metatarsal bone, considerable improvement followed the application of the cautery, the suppuration, swelling, and pain in the soft parts of the foot were much reduced, and the patient was enabled to walk again.

In more advanced cases of caries of the calcaneum, it is thought advisable, before applying the hot iron, to remove the diseased parts with the sharp spoon. In the most severe cases it will be found necessary for cure to perform a partial subperiosteal resection, or to remove the whole of the diseased bone. In a case of completed necrosis of the calcaneum, a long-standing source of annoyance may at once be removed by extracting the sequestrum. In cases of carious degeneration affecting several metatarsal bones, there being a well-marked scrofulous diathesis, the author recommends amputation of the foot by Pirogoff's method.

RISEL ON GASTROTOMY.—A case of cancerous ulceration of the œsophagus, in which it was found necessary to open the stomach, is reported by Dr. Otto Risel of Halle in the *Deutsche Medicinische Wochenschrift*, of May 4th. The patient was a strong, well-nourished, and slightly pale man, aged fifty-two years, who for some few weeks before he came under the author's notice had suffered from difficulty in swallowing, and complained of inability to pass into the stomach any solid food. There had not been any vomiting; the patient had not felt any pain, but had been much troubled with accumulation of mucus in the throat. The seat of the obstruction in the gullet was referred by the patient to a point behind the lower portion of the sternum. Behind the tendon of the left sterno-mastoid muscle, just above the corresponding sterno-clavicular articulation, could be felt a firm, immovable tumour of about the size of a pigeon's egg. This was smooth over its anterior surface, did not fluctuate, and was not painful. The œsophageal sound could be passed almost as far as the stomach, but near the cardia was arrested by a constriction, through which, on slight pressure, the olivary extremity of the smallest tube could be forced. During a period of one month after he had been first seen by Dr. Otto Risel, the patient derived much benefit from the frequently repeated introduction of the œsophageal sound. There was diminishing difficulty in swallowing, and a marked increase in the strength and general condition. After this period, however, the improvement rapidly ceased, and the œsophageal constriction increased to such an extent as to prevent the introduction into the stomach of



the smallest sound. In the course of the next three weeks there were febrile paroxysms, with signs of infiltration of the base of the right lung. The patient became much emaciated, had difficulty in swallowing fluid as well as solid food, and was much troubled by a violent straining cough, with much expectoration of thick and occasionally blood-stained mucus. Attempts at passing the smallest sound through the obstruction in the gullet caused intense pain. There was dulness over the back of the chest on the right side, and crepitation, fine or coarse, was heard over all parts of the corresponding lung. Hence it was concluded that there had been perforation of the œsophagus, and subsequent outpouring of food into a parœsophageal cavity just above the origin of the diaphragm. As attempts to feed the patient by the rectum were attended by almost negative results, gastrotomy was performed by Dr. Risel on November 9th of last year. An incision having been made under carbolic acid spray in the anterior abdominal wall, the anterior surface of the stomach was found without much difficulty, and then, after having been dragged forwards, was incised and fixed to the edges of the external wound. Near the cardiac region of the organ was found a small, hard, tuberculated tumour, which was regarded as a cancerous gland. In consequence of the frequent and violent fits of coughing, no attempt was made to pass food into the stomach until the third day. On the seventh day, the patient died from exhaustion, in a state of collapse. At the necropsy, the edges of the gastric and external orifices were found to be firmly glued together. Beyond this region there were no traces of peritonitis. At the posterior portion of the base of the right lung was a small cavity communicating with a dilated bronchus, and containing a brownish semi-fluid mass. The lower half of the wall of the œsophagus presented a large ulcer commencing about two centimetres above the cardiac extremity of the stomach, and extending upwards over an extent of about nine centimetres. The edges of this ulcer were hard, notched, and elevated, its base was grey and sloughy, and in its midst was a large orifice communicating with the above-mentioned cavity at the base of the right lung, the surface of which organ in this region was closely adherent to the right wall of the œsophagus and to the vertebral column.

Dr. Risel, in his remarks on this case, points out that, as was proved beyond doubt by the necropsy, death was the result of exhaustion and not of the operation. The peritonitis had been purely adhesive and limited to the immediate neighbourhood of the wound. The adhesions between the margins of the gastric and those of the external wound were firm and had not been disturbed by the violent fits of coughing. In seeking for the stomach through the wound in the abdominal wall, the best guide, it is stated, is the under surface of the liver, and the hollow viscus may be readily recognised by the thickness of its coat, the absence of longitudinal bands of muscle, and the arrangement of its vessels, the veins being much more conspicuous than the arteries, along the greater and lesser curvatures. In cases where it is required to open the stomach as near as possible to the centre of its long axis, the best external incision is one made parallel and about a finger's breadth internal to the margin of the left osseous wall of the thorax. When the organ has to be opened near its pyloric extremity, the incision in the abdominal wall should be made nearer to the middle line.

W. JOHNSON SMITH.

KJÖNIG ON A CASE OF GASTRIC FISTULA.—Dr. Kjönig describes in the *Norsk Magazin for Lægevidenskaben*, 3rd series, Band vii (abstract in *Nordiskt Medicin. Arkiv*), a case of fistula of the stomach in a married woman aged 34, whom he had had under observation since 1872. The opening was situated in the ninth left intercostal space, about three and one-fifth inches from the point of the tenth rib; it was a cleft about four-fifths of an inch long, but only wide enough to admit the blunt end of a probe. The edges were inverted, excoriated, and adherent to the subjacent rib. Sometimes, especially in the morning, a fluid having an acid reaction and mixed with food escaped. The appetite was good; the bowels were costive; the patient's general condition was satisfactory. From the age of eight she had suffered from pain in the left hypochondrium, and later had been often treated for chlorosis. When she was nineteen years old the pain in the hypochondrium and epigastrium increased, and was generally accompanied by pain over the left olecranon. In 1865 a painful swelling of the size of an almond was observed, and in 1871 a fistula was formed at the same spot. The fistula closed after a time, but on the last day of the year it again opened. The opening, which at first would admit a little finger, afterwards contracted, so that only an inconsiderable quantity of aliment escaped. The discharge consisted essentially of a clear tenacious mucus, and on one occasion of a bile-stained or rather blood-coloured fluid. The administration of a two per cent. solution of bicarbonate of soda did not change the reaction of the fluid which escaped.

Dr. Kjönig remarks that fifty-six cases of gastric fistula had been observed up to 1876. He regards the prognosis as good, inasmuch as, so far as statistics show, death was attributable to the fistula itself in only one-fifth of the cases. A. HENRY, M.D.

KEYES ON MULTIPLE CHANCRE OF THE NIPPLE.—In the April number of the *American Archives of Dermatology*, Dr. E. L. Keyes of New York, relates the following case of syphilitic contagion by suckling, which is of interest on account of the unusual number and character of the initial manifestations. Mrs. X., æt. 41, had two healthy children, and continued to suckle the younger until it was nineteen months old. At this time a friend died in childbed. Mrs. X. now weaned her own child, and began to suckle that of her deceased friend when a few days old. This latter, when two months old, was noticed to have a sore mouth, but Mrs. X. continued to suckle it during another month. In the meantime, the child had snuffles, and other signs of congenital syphilis, and was finally sent to a hospital, where it died.

Shortly after the baby's removal, and about one month after the sores had been noticed in its mouth, a number of lumps appeared around Mrs. X.'s nipples. When first seen by Dr. Keyes, the lumps had existed for about a month. He found eight distinct and separate lesions arranged in a semicircle about the base of the right nipple, and four, similarly placed, on the left breast. The lesions were prominently raised above the surface, and were nearly uniform in size and appearance. Each was about the size of a split pea, flattened, livid at the base. The apices were dry and squamous, except one on the left breast, which was moist and oozing, and looked like a typical mucus patch. There was no induration about any of them, and there was no pain. Two or three hard glands could be felt in each axilla. The patient was shown before the New York Dermatological

Society, where the lesions were unanimously considered to be secondary in character. On a careful examination, however, no other lesion was discovered, either of the genital organs or on any other part of the body.

Seven weeks after the first appearance of the lumps about the nipples, the woman began to feel ill, had a slightly raised temperature, cervical adenopathy, osteocopic pains, and finally a typical syphilitic roseola of the whole body. A short time afterwards the axillary glands were markedly indurated, and the chancres somewhat more so than when previously observed.

ARTHUR COOPER.

JORDAN ON SPONGES AS SURGICAL DRESSINGS, AND ON TEREBENE AS A SURGICAL AGENT.—In the *British Medical Journal*, March 30, 1878, p. 449, Mr. Furneaux Jordan advocates the use of sponges, charged antiseptically, in many surgical operations. A sponge exerts a soft, uniform, diffused, elastic, and measurable pressure. Slight pressure will keep a wound clean, moderate pressure keeps up efficient drainage of all deep-seated fluids, and renders the ordinary drainage-tube, as a rule, unnecessary. In operations on the breast, Mr. Jordan looks on a big sponge as his best friend. Sponge "bites" the skin, and thus keeps superficial parts *in situ*, as well as the deeper, by means of its elastic pressure. The sponge dressing may be utilised also to apply lotions and fomentations.

A case of comminuted depressed fracture of the parietal bone, with small loss of brain-substance, dressed with sponge soaked in terebene, was all that could be wished on the fourteenth day.

JORDAN ON SUBCUTANEOUS DIVISION OF THE INTERNAL CONDYLES OF THE FEMORA IN GENU VALGUM.—In the *Lancet* for May 4 (p. 645) Mr. Furneaux Jordan relates a case of extreme genu valgum, in which he performed subcutaneous division of the internal condyles of both femora, with complete removal of the deformity. The case, which is illustrated by a diagram, is instructive in explaining the perfection to which this operation has arrived, and in showing its great simplicity. On March 13, 1877, Mr. Jordan performed the operation devised by Dr. Ogston of Aberdeen, and divided the left internal condyle antiseptically, and with moderate force brought the leg quite straight. Six weeks later a similar plan was carried out on the right leg, and soon the man walked with straight limbs and good action of the knees.

COLLES ON RUPTURE OF THE TENDON OF THE GLUTEUS MAXIMUS.—An instance of this rare accident was related by Mr. Colles at a meeting of the Surgical Society of Ireland (*British Medical Journal*, April 6, 1878, p. 487). A farmer, aged 63, powerfully built, trying to lift a heavily laden cart, felt as though he had been struck with a stone in the gluteal region, and heard, at the same time, a loud snap. He fell, and was carried home, when the part was found extremely painful, and considerably ecchymosed. The rupture had occurred at the junction of the tendon with the muscles. The limb was paralysed, although the sciatic did not appear to be injured; it seemed as though the paralysis was Nature's effort to secure rest for the limb.

[In the year 1862, during a residence in Java, a halfcaste foreman over a gang of Malay workmen was greatly exasperated at the indolence of eight or ten men in moving a heavy iron beam. Thrusting

them away, with strong language in addition, he seized the beam and threw it a distance of several feet, falling himself to the ground at the same moment. When seen, he was found to have ruptured the biceps muscles on both arms and the tendon of the quadriceps extensor on both legs, in addition to the recti abdominis.

Although there was no cutaneous lesion of continuity, extensive collections of purulent matter were found over each ruptured muscle, and several months passed before he was able to resume his occupation; and, so far as the reporter knows, he never again had a desire to test his muscular powers in a similar way.—*Rep.*]

ATKINSON ON AN ENORMOUS ENCHONDROMA OF THE HUMERUS.—This case, reported in the *Lancet*, May 1878, p. 640, is interesting, as being the largest enchondroma of the upper extremity upon record. The arm and tumour together weighed 33 lbs. 6 oz. Death took place from pyæmia on the twenty-fifth day after the operation.

WEIL AND OTHERS ON REINSERTION OF TEETH.—Dr. Weil, of Munich, is referred to in the *Lancet* of April 1878 (p. 588), as having extracted a tooth and reinserted it after stopping a carious cavity. This method of procedure is not considered unusual by Mr. Trehanne (p. 740), who some years ago extracted a carious tooth and reinserted it, carefully stopped, in order to check hæmorrhage, uncontrollable by other means. [In the *Lancet*, June 1861 (p. 557), a very able paper with plates, by Mr. Charles Vasey, may be consulted with advantage by those interested in this subject; and by reference to the *Medical Digest* of the New Sydenham Society several highly instructive papers may be referred to, subsequent to Mr. Vasey's, especially those by Mr. Lee and Mr. Lane (*Lancet*, vol. i, 1875, p. 785, vol. i, 1877, p. 526), where syphilitic infection followed the operation.—*Rep.*]

RICHARD NEALE, M.D.

PARSONS ON SEVERE INJURY OF THE SKULL: LOSS OF BRAIN-SUBSTANCE: RECOVERY.—Dr. M. G. Parsons relates the following case in the *Journal of the Southern Illinois Medical Association*, February 1878. He was called on November 3rd, 1877, to see W. S., aged 18, who had been helping to saw wood with a circular saw driven by horse-power. In some way the saw, together with the balance-wheel and the frame which held it, was thrown from the foundation on which it rested while running at high speed, striking the patient upon the head, in a line from the right ear to the left eye, making an incision about five inches long through the scalp and integument covering the forehead, about four inches through the outer table of the skull, and two and a half inches through the inner table. The accident occurred at 10 A.M., and Dr. Parsons did not see him until evening. Dr. Parsons believes that, in the interval, at least five or six drachms of brain-substance must have escaped. The spicula of bone were carefully removed from the wound, several pieces being taken from the opening through which the brain escaped. In all, about fifteen pieces were removed, some of which were picked out of the mangled portion of the brain, a considerable amount of which escaped during the operation. After the removal of the loose bone, sutures were applied, the lower portion of the wound being left open for drainage. The operation was performed without an anæsthetic. Warm water dressings were applied, and brandy and morphia



given. The pulse ranged for the next twenty-four hours from 40 to 60, being quite irregular most of the time. Next day the patient was quiet; pulse 60, and more regular; he had taken some nourishment. The bowels were constipated, and were moved with much difficulty by five or six ounces of sulphate of magnesia. He suffered considerable pain, but was only unconscious during the first three days, and only at intervals. Carbolic acid dressing was used after the first night. On the sixth day he was convalescing rapidly, and was dismissed, with orders at once to report any unfavourable symptoms. All the treatment was bromide of potassium in fifteen-grain doses every three or four hours for the first three days. The patient came to town on the fifteenth day, a distance of ten miles, in a lumber-waggon, and had not had an unfavourable symptom since the third day after the accident. The two remaining stitches were now removed. There was no depression and no tenderness in the region of the wound. The patient at the date of the report was at work.

**HODGEN ON THE PLASTER OF PARIS JACKET IN FRACTURE OF THE SPINE.**—Dr. J. T. Hodgen writes in the *St. Louis Medical Journal* for March 1878, that he has recently treated two cases of fracture of the spine, one in the dorsal and the other in the lumbar region, with the plaster of Paris jacket. In the first there was no paralysis, but it was accompanied by fracture of the sternum. The second was a fracture of the third lumbar vertebra, with displacement, deformity, and paralysis. The fracture in the dorsal region was at the fifth or sixth vertebra, and there was no displacement. He remarks that, although the circular turns of the plaster bandage cannot be made to reach sufficiently above the sixth dorsal vertebra, to afford any direct support to the vertebral column, it must be remembered that the ribs connected with the dorsal vertebrae pass obliquely and downward and forward to join the sternum, and may be used to support the upper dorsal vertebrae; so that, by encasing the upper part of the pelvis, the abdomen and the lower two-thirds of the chest in a plaster bandage, we may efficiently support the spine, and secure the rest to the part so important to repair without impairing the general health of the patient, by confining him to bed. The case of dorsal fracture progressed without an unfavourable symptom, and was well at the end of two months and a half, while, in the lumbar fracture, the paralysis still remained three months after the accident; no bed-sores, however, had formed, probably in consequence of the use of the plaster jacket.

**GROSS ON GASTRIC DISTENSION, COMPLICATING INTESTINAL METEORISM.**—Professor Gross of Nancy (*Revue Médicale de l'Est*), describes the case of a woman, aged 68, for whom he performed celotomy for strangulated hernia. Peritonitis followed, with extreme tympanites, hiccup, and ventral distension and hardness, but without vomiting. He introduced the œsophageal sound, and nearly ten pints of fluid flowed away. Improvement at once set in, and the patient recovered. He relates other facts, drawn from the practice of Kœberlé of Strasburg, in which the distension of the stomach complicated intestinal meteorism, and in which the effects of the latter were apparently aggravated by this complication, great relief following the catheterisation of the stomach, and the removal of the gas or fluids which distended it. He concludes that this is a point which clinically should not be overlooked; and it is probably

worthy of more general attention than it has yet received.

**THIERSCH ON CAUTERISATION OF NÆVI.**—Dr. Thiersch applies over the surface of the tumour a little plate of copper, pierced at regular and small distances with small holes. Through these he passes a needle mounted in a cork, and previously heated in a spirit lamp. The cauterisation is thus effected very regularly. The same method is applicable to the linear division of the skin by a cutting needle, recently recommended by Mr. Balmanno Squire.

## RECENT PAPERS.

- The Management of the Omentum in Operations. By Dr. Studgaard. (*Nordiskt Medicin. Arkiv*, Band x, Häft 1.)  
 A Case of Compound Comminuted Fracture of the Left Leg: Delayed Union. By Dr. A. Bidder. (*Deutsche Medicin. Wochenschrift*, May 18, 25, and June 1.)  
 On a New Apparatus for Fractures of the Patella. By Dr. Zander. (*Ibid.*, May 25.)  
 Syphilis acquired in advanced Life. By Dr. von Sigmund. (*Wiener Medicin. Wochenschrift*, May 25, June 1 and 8.)  
 Successful Extirpation of a Cerebral Osteosarcoma of the Right Half of the Lower Jaw, with Preservation of the Continuity of the Bone. By Dr. Weinlechner. (*Allgemeine Wiener Medizin. Zeitung*, May 21.)  
 A Case of Strangulated Hernia reduced by Esmarch's Apparatus. By M. Chapelle. (*L'Année Médicale*, May 1878.)  
 Diffused Hypertrophic Syphilis of the Face. By M. Maurice Raynaud. (*L'Union Médicale*, June 4.)  
 Bayonet-Wound of the Abdomen. By Dr. Jacobasch. (*Berliner Klinische Wochenschrift*, June 3.)  
 Osteo-Sarcoma. By Mr. Macnamara. (*Lancet*, May 11.)  
 On Concussion of the Spinal Cord. By M. Trélat. (*Le Progrès Médical*, May 18.)  
 Two rare Cases of Luxation of the Shoulder. By M. A. Lapierre. (*La France Médicale*, May 11.)  
 On a New Method for the Reduction of Recent Dislocations. By M. Bazy. (*Ibid.*, May 8.)  
 Treatment of Coxalgia and White Swellings of the Knee by the Continuous Traction Method. Other Applications of this Method. By Dr. Panas. (*Journal de Médecine*, May 1878.)  
 Tearing off of the Thumb, with the Tendons of the Flexor Longus and the Extensor Longus. Tearing out of the Collateral Nerves: Cotton-Wool Dressing: Rapid Cure without complications. By M. Mossé. (*La France Médicale*, May 22.)  
 Plan of Operation for the Cauterisation of Hæmorrhoids. By M. Richet. (*Gazette des Hôpitaux*, June 4.)  
 On Coxalgia and its Diagnosis. By M. Duplay. (*Ibid.*, May 24.)

## MATERIA MEDICA AND THERAPEUTICS.

**CHIRONE ON THE ACTION OF CYCLAMIN.**—In an article published in *Il Morgagni* for December, Dr. Chirone describes a number of experiments on the physiological action of cyclamin, made in the pharmacological laboratory of the University of Naples, and sums up in the following conclusions.

1. Cyclamin has a very important local action, especially on the subcutaneous connective tissue, in which it produces sloughing and extensive ulceration; this, however, heals spontaneously, and seldom or never causes the death of the animal.
2. Cyclamin kills all animals without distinction by its general action.
3. Cyclamin, or the physiological action of cyclamin, is manifested by the following symptoms: stupefaction; hyperæsthesia, which may sometimes lead to spontaneous convulsions; fall of temperature; weakness and frequency of the movements of the heart; respiration sometimes frequent and shallow, sometimes rare, deep, and difficult. With a larger dose, the symptoms are: increased stupefaction; very great hyperæsthesia, and convulsions readily produced; considerable rise of temperature; the heart's action weak, hurried, and irregular;

respirations irregular; ready production of serous exudations with effusion of hæmatin; finally, rapid fall of temperature, coma, and death.

4. The action of cyclamin never shows itself with great rapidity, and may last three or four days, or may kill within forty-eight hours. The slowness of its action is due to slowness of absorption.

5. Cyclamin acts directly on the blood, and influences the whole system by the grave changes which it produces in the blood.

6. Cyclamin blackens the blood as soon as it comes into contact with it.

7. The spectrum of oxyhæmoglobin is profoundly modified by cyclamin. In the first place, the two striæ characteristic of oxyhæmoglobin disappear, and the band peculiar to reduced hæmoglobin comes into view. Hæmoglobin reduced by cyclamin, however, does not for several days lose its tendency and again become oxidised, and, if it be shaken in contact with air, the striæ of oxyhæmoglobin reappear. The prolonged action of cyclamin decomposes hæmoglobin and liberates hæmatin; sometimes producing in the spectrum a dark band on the red in the vicinity of the line C of Fraunhofer, sometimes two very faint bands between D and E. When the hæmoglobin is decomposed, all absorption-bands disappear from the spectrum of blood treated with cyclamin, except that of hæmatin. The hæmatin bands, however, soon disappear in consequence of its spontaneous absorption.

8. A solution of hæmatin, treated with cyclamin, first becomes of a red colour tending to blue, then of a yellow colour.

9. It may be that cyclamin acts in the blood by producing a special fermentation; but Dr. Chirone believes that it decomposes hæmoglobin by combining directly with globulin (of Denis) and setting hæmatin free.

10. The precipitate produced by the action of cyclamin on the blood resembles cyclamin itself in many characters.

11. Cyclamin decomposes the hæmoglobin of putrid blood much more easily than that of fresh blood; but the precipitate obtained in the first case is very impure from admixture of organic detritus.

A. HENRY, M.D.

MAGNAN ON THE PHYSIOLOGICAL AND PATHOLOGICAL ACTION OF ALCOHOL AND ESSENCE OF ABSINTH.—The chief facts contained in this paper (*Annales Médico-Psychologiques*) may be placed under the following heads.

1. The immediate action of alcohol, given in a sufficient quantity, is to produce drunkenness.

2. The prolonged use of alcohol in the dog is followed by progressive symptoms with each new dose of the poison, which show the progressive phenomena in the solution of alcoholism. On the fifteenth day of the intoxication, irritability and impressionability supervene; ten days after this there are illusions and hallucinations at night, and in about a month some delirium, both by day and by night.

3. The prolonged use of alcohol gives rise again in the second month to some trembling, which shows itself at first in the hind feet, next reaches the forefeet, and extends progressively to all parts of the body. In some cases it does not produce epileptic attacks. Finally, digestive disturbances and various complications occur, closely resembling those to which human alcoholics succumb.

4. The anatomical lesions of alcoholism in the dog show in various degrees a fatty degeneration (kidney

and heart) and tendency to chronic irritations (meninges, spinal cord, and pericardium.)

5. Essence of absinth in a weak dose produces vertigo and muscular tremor in the anterior parts of the body; a large dose produces epileptic attacks and delirium.

6. In the first stage (tonic convulsions) of the absinthic attack, the pupils dilate; there is injection of the optic papilla in the fundus of the eye, and congestion of the brain. These phenomena are not in accord with the generally admitted theories of the mechanism of epilepsy.

7. Animals deprived of the cerebral lobes show, under the influence of the essence of absinth, epileptic attacks, and the tremors resembling the convulsive attacks of subjects not suffering under mutilation of these parts.

8. After section of the spinal cord below the bulb, the intravenous injection of absinth produced an attack of clonic and tonic convulsions of the head, with foaming at the mouth, and then an attack of a more distinctly spinal character, tonic and clonic convulsions of the trunk, with expulsion of the urine and fæces.

9. The isolated action of each segment of the cord in the regions supplied by it, gives reason for a belief that a totality of the organ is necessary for the production of the complete epileptic attack.

CHARLES ALDRIDGE, M.D.

PIFFARD ON PULSATILLA.—In the *New York Medical Record* Dr. H. G. Piffard gives an account, historical and contemporary, of the use of the *anemone pulsatilla*, and the closely allied *anemone pratensis*, to both of which plants the name of *pulsatilla nigricans* is generally given.

He shows, by quotations from Galen, Paulus Ægineta, and Avicenna, that it was of old esteemed in diseases of the eye and skin, in derangement of the menstrual functions, and as a galactagogue. At the latter end of the last century its fame was revived by Baron Störck, who recorded a long list of the effects of the drug from numerous experiments on healthy persons. Störck's results are quoted by Hahnemann, who added a large collection of symptoms said to have been produced by the drug. Dr. Piffard considers the majority of these alleged symptoms to be accidental, illusory, and non-essential. The reason why the ancients, as well as Störck, Hahnemann, and Rademacher found *pulsatilla* an active remedy, while others have failed to obtain any effects, is that modern pharmacy has only given inert preparations.

The active principle is volatile and dissipated by heat and desiccation, and is only to be found in a tincture, or a watery solution, made from the fresh plant.

There appears, says Dr. Piffard, to be a remarkable uniformity of opinion as to the use of *pulsatilla*. It has been reported to be of use in amaurosis, in some nervous diseases, in affections of the generative system, and of the stomach and skin. Dr. Piffard's own experience with the drug is limited to three cases of dysmenorrhœa and several cases of epididymitis. In two cases of dysmenorrhœa of considerable standing, improvement or cure rapidly ensued on the administration of *pulsatilla*; in the third it absolutely failed to affect the symptom. In a few cases of epididymitis, rapid improvement appeared to follow small doses of the tincture of *pulsatilla*.

[As, in the above quoted cases of dysmenorrhœa, Dr. Piffard states that no vaginal examination was



made, the report cannot be looked upon as satisfactory, no attempt having been made at diagnosis before instituting a therapeutical experiment. No evidence adduced in this paper seems to warrant Dr. Piffard's conclusion that pulsatilla is worthy of further trial—a conclusion which is apparently better supported by the alleged physiological activity of the drug. The extreme vagueness of the expressions "amauresis", "some nervous diseases", "affections of stomach", etc., render the allegations of its therapeutical virtues almost valueless.—*Rep.*

HORATIO DONKIN, M.B.

ANNANDALE ON CURE OF WRITER'S PALSY BY SUBCUTANEOUS INJECTION OF STRYCHNIA.—At the meeting of the Medico-Chirurgical Society of Edinburgh on March 6th, 1878, Mr. Annandale showed a patient who a few weeks ago had suffered from writer's palsy. His medical attendant had tried strychnia internally and galvanism without effect. Having studied Dr. Bianchi's paper on the subcutaneous injection of strychnia (see *British Medical Journal*, January 19, 1878), he resolved to try the method. Before beginning the injections, the patient suffered from—1, want of power in the hand; 2, spasmodic flexion of the thumb when writing; and 3, pain in the back of the neck. Nine subcutaneous injections had been made into the flexors and extensors of the forearm, with the result of complete restoration of power, removal of pain at the back of the neck, and partial improvement of the flexion of the thumb. A splint was now being used to remedy the last. Specimens of the patient's handwriting before and after treatment were shown. Mr. Annandale explained that the hypodermic injection consisted of equal parts of liquor strychniæ (B. P.) and water. Of this, six minims were injected every second day, the dose being increased by one minim, till it amounted to twelve minims.

SQUIRE ON REMOVAL OF CHRYSOPHANIC ACID STAINS.—To obviate a great objection to the use of chrysophanic acid in psoriasis, Mr. Balmanno Squire suggests, in the *British Medical Journal*, March 1878, p. 398, the use of aqua chlori, which reagent in his hands speedily removed the colour. A saturated solution of chloride of lime answered equally well, quoad the colour, but destroyed the fabric. Dr. W. Fergus, however (*Ibid.*, page 470), failed to remove the colour from a pocket-handkerchief by a fairly strong solution of chloride of lime.

DEODORISATION OF IODOFORM.—Two plans are mentioned in the *British Medical Journal*, April 27 and May 4, 1878, pp. 610, 669, to effect this desirable object. An ethereal solution leaves an odourless coating of iodoform on the parts to which it may be applied, according to *L'Union Médicale*. Dr. Cole (*New Remedies*) states that, if the iodoform be mixed with an equal part of tannin, all offensive smell is destroyed.

RICHARD NEALE, M.D.

SIREDEY AND DUBOUÉ ON ERGOT IN TYPHOID FEVER.—M. Siredey (*Journal de Médecine et de Chirurgie Pratiques*, February 1878) gives an account of a young man, aged 20, who recovered from a very severe attack of fever after the use of ergot. The patient entered the Hôpital Lariboisière on the tenth or twelfth day of the disease. The tongue was very dry and brown, the gums were covered with sordes, speech was difficult, and the ideas were confused. At night the patient had constant delirium, with subsultus and other nervous phenomena, great pain

in the back of the neck, opisthotonos at times, and symptoms like meningitis. The next day the abdomen was retracted, and signs of collapse seemed to portend early death. M. Siredey, bearing in mind the success attained by M. Duboué (of Pau) in the treatment of ataxo-dynamic cases by ergot, prescribed 30 grains to be taken during the day. On the following morning the muscular twitchings had ceased, the abdomen was less drawn in, and the general condition was improved. The ergot was continued for three days, after which the indications of danger entirely disappeared, and the fever ran its course with moderate intensity.

M. Duboué recommends ergot in typhoid fever for reasons deduced from its physiological action, and in one of his works (*De quelques Principes fondamentaux de la Thérapeutique*) cites seven cases in which it was employed successfully. One patient, a woman, who was three-and-a-half months pregnant, was treated with ergot for fifteen days, and recovered without miscarriage, although she took a daily dose of 22 to 30 grains of the drug.

SHERWELL ON THE THERAPEUTIC USES OF LINSEED.—Dr. Sherwell says (*New York Medical Record*, April 13) that, believing that the same effects might be expected in the human subject as are known to follow the use of linseed in the lower animals, he has made it a portion of the diet of a number of patients who were unable to take cod-liver oil in the ordinary manner.

The better quantities of flaxseed contain about thirty per cent. of oil, so that by the use of the unpressed seed, a very considerable quantity of oleaginous matter can be incorporated in the daily diet. The seed may be used in several ways. First, the freshly ground seed may be taken in the mouth, and thoroughly masticated before swallowing; second, it may be given suspended in milk; and third, the unbroken seed itself may be used. This last method is the one that he prefers. To carry this out, he commonly directs the patient to carry in his pocket or other receptacle a quantity of the seed, and from time to time to take a little of it in his mouth, and to chew it thoroughly before swallowing, in order to ensure complete insalivation. In this way some patients will consume several ounces a day, the amount, of course, varying greatly in different cases.

Thus far, this use of the seed has not been attended with any disagreeable accompaniments. The stools are rendered easy and natural, without any tendency to diarrhoea, or other unpleasant complications.

The ordinary seed of the drug-stores is not the best that can be obtained for this purpose, a much better article being that known as Calcutta seed. Care should be taken that it is free from admixture with other seeds, chaff, dirt, etc.

As a substitute, in many cases, for cod-liver oil, it is believed that it will be found, on further trial, to fully justify the expectations concerning it.

HOLMES ON THE MEDICINAL PLANTS OF LIBERIA.—In an article in the *Pharmaceutical Journal* for March, Mr. E. M. Holmes gives information regarding some medicinal plants in Liberia.

*Ocymum viride*, Willd. (Fever-plant) is commonly used as a remedy for fever of any kind, being used as a reliable substitute for quinia. It is given in form of an infusion, a wineglassful being administered at intervals until perspiration is freely induced, the patient being kept in bed. Perhaps its medi-

cinal properties may be referred to in the presence of thymol.

*Aspilia latifolia* (hæmorrhage plant). Dr. Roberts, the nephew of the late president of Liberia, gives accounts of the hæmostatic properties of this plant, which partake of the marvellous. He states "that the natives always prefer it to any treatment adopted by the Europeans." He further says "that he has witnessed its use in several cases where arteries had been severed, the leaves and flowers being pounded together and applied to the wound, when the hæmorrhage would stop in a few minutes, and the wound would heal rapidly without any other application." The properties of this plant certainly are worth investigation, so that it may be determined whether its action is merely mechanical, like that of matico, or whether its juice, like that of *Jatropha Curcas*, possesses an inherent property of coagulating the fibrin of the blood.

BOYD ON VERATRUM VIRIDE IN PUERPERAL CONVULSIONS.—Two years ago, Dr. O. S. Boyd suggested the treatment of puerperal convulsions with veratrum viride. In the January number of the *American Practitioner* he publishes a paper on the subject, referring to ten cases treated by Dr. Fern, of Brooklyn, and another which came within his own observation. The patient, a primipara, had four convulsions, at intervals of thirty to seventy-five minutes. A few minutes after the last one, consciousness having been recovered, twenty drops of the tincture of veratrum viride were given, and the dose was repeated every fifteen minutes, until 120 drops had been taken. After the sixth dose, the pulse had fallen from 144 to 130. Ten minutes after this dose, the patient vomited nearly a pint of tenacious mucus, coloured by the veratrum. Within ten minutes after the vomiting began, the pulse was 54 per minute. Vomiting followed three times in succession, and she was then given 25 drops of laudanum, and this was repeated at every subsequent attack of vomiting, which amounted to four times in all. A quiet sleep then came on. Directions were given to resort to the veratrum whenever the pulse rose to 80; and two doses only, at long intervals, had to be given. The patient made a good recovery.

VOLQUARSDEN ON THE CURE OF SCIATICA BY PHOSPHORUS.—Dr. Volquardsen reports, in Schmidt's *Dictionary* and the *Pesth Medico-Chirurg. Presse*, No. 39, 1877, a case of sciatica, which lasted for two years, and defied all treatment. He then arrived at the idea of trying the internal use of phosphorus, which he prescribed in doses of fifteen milligrammes (about one-fourth of a grain) three times a day. Three days sufficed to obtain a marked improvement, and three weeks brought a complete cure.

MILLER ON EMPLASTRUM BELLADONNÆ FLUIDUM FOR ACUTE AFFECTIONS OF THE BREASTS.—Dr. H. Miller recommends this application (*Edin. Medical Journal*, December, 1877). It is an alcoholic extract of double the strength of the emplastrum belladonnæ, but kept fluid with collodion. Camphor was combined with it for the purpose of aiding to arrest the natural mammary secretion. It is applied with a brush over the affected regions night and morning, until the acute symptoms give in. No rubbing is necessary. It is of equal value, whether the inflammatory irritation accompanying the outset of the lacteal secretion be due to exposure to cold, to inflamed nipples, or to obstruction in the

milk-ducts. It may also be relied upon for restraining the secretion of milk, or to prevent its forming at all. In the latter case, its use should be commenced immediately after the birth of the child.

AROMATIC SYRUP OF LIQUORICE.—The following formula is taken from the *American Journal of Pharmacy*.

Take of powdered extract of liquorice, 4 ounces; Jamaica ginger, cinnamon bark, each, 2 ounces; cloves, 1 ounce; sugar, 60 ounces; water, a sufficient quantity. Reduce the cinnamon, ginger, and cloves to a coarse powder, and boil in two pints of water over a slow fire for one hour. Then strain, and dissolve in the liquid the powdered extract of liquorice, with the aid of a gentle heat stirring to assist the solution. When dissolved, add the sugar, keeping up the heat till the latter is also dissolved; then strain while hot, and add hot water through the filter to make four pints of finished syrup.

This is recommended as a most effectual disguise to the taste of quinine.

STOKES'S LINIMENT.—The formula adopted by the American Pharmaceutical Association, on the recommendation of the Committee on Unofficial Formulæ, is as follows.

Oil of turpentine, 3 ounces; acetic acid, half an ounce; yolk of one egg; rose-water, 3 ounces; oil of lemon, 60 minims. Mix.

PAJOT'S ELASTIC CRAYON OF NITRATE OF SILVER.—M. Pajot (*Annales de Gynécologie and Gazette Obstet.*, No. 21) takes a laminaria tent two millimetres in diameter, dips it in thick mucilage, and then rolls it in finely powdered fused nitrate of silver, and allows it to dry. He thus obtains an elastic crayon of the ordinary size, which may be introduced into the uterus without fear of breaking. He believes this means to be applicable to other cavities, and for other more powerful caustics.

#### RECENT PAPERS.

- Experimental and Comparative Study on Arsenic and Cod-Liver Oil in the Treatment of Pulmonary Phthisis. By M. Rendu. (*Lyon Medical*, May 5.)
- On the Beard of Indian Corn in Acute and Chronic Affections of the Bladder. By Dr. Dufau. (*L'Union Médicale*, May 15.)
- On the Indications for Mineral Waters in Chronic Diseases, and their Therapeutic Actions. By Dr. Durand Fardel. (*Bulletin Général de Thérapeutique*, May 15.)
- On the Comparative Uses of Eserine, Atropine, and Duboisine, in Ocular Therapeutics. By Dr. Wecker. (*Ibid.*, April 30.)
- Notice on the Chlorhydrate of Pilocarpine. By Dr. H. Dor. (*Lyon Medical*, May 26.)
- On Salicylic Acid and its Compounds applied to the Treatment of Fits of Gout. By M. Bouloumié. (*La France Médicale*, May 25.)
- Treatment of Whooping-Cough by Tincture of Drisera. By Dr. Louvet-Lamare. (*Journal de Thérapeutique*, May 25.)

#### OPHTHALMOLOGY AND OTOTOLOGY.

HORSTMAN ON IMPAIRMENT OF VISION AFTER LOSS OF BLOOD.—Under the above heading, Dr. C. Horstman records (*Klinische Monatsblätter*, April 1878) six cases which he had observed during the past year at Berlin, in which, after loss of blood in various ways, there had followed impairment, or loss of sight.

CASE I. A man, aged 40, vomited blood on one occasion during the year previous, and again about fourteen days before coming to the hospital, and



three days afterwards noticed that his sight was failing him. On examination, his field of vision was found much diminished; and there were traces of optic neuritis. On subsequent examination, the visual defect was permanent, and the optic discs were unnaturally pale.

CASE II. A man, aged 28, had suffered from painful digestion since childhood, and, for more than a year had suffered from gastric pains. Then hæmatemesis occurred, and, seven days afterwards, he found that during several hours he was unable to distinguish light from darkness. This was followed by a gradual improvement, but, in the end, his optic discs remained white and irregular in outline, and there was a permanent and considerable contraction of the visual field in each eye.

CASE III. A man, aged 44, very corpulent, suffered from an attack of typhoid fever, followed by severe intestinal hæmorrhage. Eight days afterwards, he found himself absolutely blind, unable to distinguish light from darkness; and, although his general health improved, he remained permanently amaurotic, with white and atrophied discs.

CASE IV. A young woman, aged 21, had severe hæmorrhage after an abortion, and, six days later, found herself quite blind; both optic nerves were seen to be swollen and indistinct, and there were extensive defects in the field of vision in each eye. Vision remained permanently impaired, especially in the left eye, her optic discs being pale, and the defects in the visual field remaining unchanged.

CASE V. A woman, aged 37, had given birth to five children in the course of seven years without accident of any kind; then followed an abortion and severe flooding. Seven days after this, she noticed her sight failing her, and, in a few hours, became absolutely blind; she never acquired even so much as perception of light. Both optic discs presented all the appearances of white atrophy.

CASE VI. A woman, aged 33, lost a great deal of blood after abortion. On the evening of the seventh day her sight failed her, her optic nerves were found to be swollen and indistinct, the retina around the disc in each eye was opaque, and, in the left eye, in the neighbourhood of the yellow spot, were one or two small hæmorrhages. Ultimately, the case assumed the ordinary features of white atrophy of both nerves, and the patient remained permanently blind.

According to Leber (von Gräfe and Sämisch's *Handbuch*), loss of sight in both eyes is not uncommon after considerable loss of blood, especially after hæmatemesis and metrorrhagia. It generally occurs a few days after—three or four days—and not directly after the loss; and the same high authority speaks of the ophthalmoscopic appearances as being negative, or those of white atrophy only. Siegmund Fries (*Klinische Monatsblätter*, 1876) has collected thirty-nine cases of the same nature; in the majority of these both eyes were affected, and remained so permanently. The defect in vision was not complained of until some days had elapsed after the hæmorrhage, and, in nearly every instance, the case assumed the typical features of white atrophy of the optic nerves.

From the complete absence of cerebral symptoms before and at the time of the hæmorrhage, the explanation of this frequent occurrence of blindness is not altogether clear; but the recent observations of Schwalbe (Schulze's *Archiv*) upon the existence of lymph-spaces between the two sheaths of the optic

nerve, communicating with the subarachnoid spaces within the cranium, appear to furnish an explanation. Samelsohn and other writers are of opinion that, owing to the sudden hæmorrhage, the total amount of blood within the cranium is materially lessened, its place is for the time taken by the fluid from the various lymph-spaces. On the blood-vessels becoming again fully supplied with blood, the lymph-spaces are overdistended, and also the sheath of the optic nerve; a condition of things which leads to pressure upon the optic nerve itself, and, in some instances, to the occurrence of that peculiar aspect of the optic disc, known as *staunungs-papille*, or choked disc.

BERGER ON A CASE OF GUMMY TUMOUR OF THE CONJUNCTIVA.—Dr. Albrecht Berger relates this case in the *Aerztliches Intelligenz-blatt*, April 23, 1878. On November 8, 1877, a young married woman, aged 30, applied to Dr. Berger at Munich on account of a sudden dilatation of the pupil of her left eye. The eye was free from pain, and presented nothing abnormal on ophthalmoscopic examination, but the pupil was widely dilated and fixed. There was a faint copper-tinted eruption on the forehead; and, although no history of syphilis could be obtained, the case was considered to be one of that nature. Under treatment with iodide of potassium, the constant current, and the instillation of eserine, the pupil resumed its normal appearance and functions in about three weeks.

In January 1878 the patient presented herself again in the following condition. She looked cachectic and extremely ill; there was a well-marked syphilitic eruption on the forehead and face, and some swelling of the cervical glands; the skin of the upper lid of the right eye was red and thickened, and covered with a scaly eruption; the iris of this eye was discoloured and indistinct, and the pupil contracted and fixed. At the inner margin of the cornea, beneath the conjunctiva, was a small round nodule of a yellowish-pink colour, around which was a zone of extremely congested vessels; the cornea itself was hazy at this spot. On the left side, the eyelids were covered with a similar scaly eruption, but the pupil acted properly, and the eye appeared in every respect normal.

The patient was put under the influence of mercury, but the inflammatory process rapidly increased and the nodule became much enlarged; at the same time a brown red mass of lymph made its appearance upon the anterior surface of the iris; this rapidly occupied the inner quadrant of the anterior chamber, and came in contact with the back of the cornea. Having reached this point it as rapidly receded and diminished in size, and about eight days afterwards the pupil became dilated under the use of atropine, and a reddish yellow stain was all that remained upon the iris; at the same time, the conjunctival swelling gradually diminished.

In this instance, the gummy swelling was associated with a dilated pupil without any impairment of the accommodation, and with no implication of any of the muscles, although the coexistence of a specific eruption pointed to the origin of the affection as being syphilitic. Soelberg Wells has described a form of mydriasis as the result of syphilis; and De Méric (*British Medical Journal*, 1869) has put upon record four cases in which mydriasis with ptosis was observed, and two others in which mydriasis occurred alone; and Wecker (*Maladies des Yeux*), as also Erlander (*Klin. Monatsblätter*, 1870), has de-

scribed cases which bear a close resemblance to the case above recorded.

BOWATER J. VERNON, M.D.

PANAS ON MYOTICS AND MYDRIATICS.—M. Panas (*France Médicale*) observes that the physiological observations of Adamuk, Grunhagen, and others, indicate that atropine diminishes intraocular pressure. On the other hand, the clinical experience of von Gräfe, Wharton Jones, and Ernest Hart, has shown that atropine increases ocular pressure in the glaucomatous condition; and they have laid down the rule that the clinical use of atropine is to be strictly avoided in pathological conditions accompanied by increased intraocular tension. M. Panas considers that the two groups of observations are not necessarily opposed; in the physiological condition atropine diminishes tension, in the pathological condition it augments tension. The latter effect is explained by the fact that atropine contracts the vessels in dilating the pupil, and causes the blood of the iris to flow backward to the ciliary processes. Further, atropine paralyses the circular muscular fibres of the vessels; thus, there is a more considerable afflux of blood, and, consequently, exaggerated tension of the eye. The effect of eserine in the physiological state would be, on the contrary, to contract the sphincter muscle of the pupil and the ciliary muscle, whence the tension is augmented. But, in glaucoma, eserine may contribute to diminish the intraocular tension, because, in contracting the vessels and narrowing the pupil, it enlarges the canal of Fontana. The canal of Fontana, situate in the substance of the large circumference of the iris must, of course, not be confounded here with the canal of Schlemm, which is, situated at the junction of the ciliary processes, cornea, and sclerotic.

HARTMANN ON THE FUNCTION OF THE EUSTACHIAN TUBE.—In a former paper in Virchow's *Archiv*, vol. lxx, p. 447, Dr. Hartmann of Berlin related some experiments, which proved that by Valsalva's method of inflation of the tympanic cavity a pressure of from 20 to 40 millimètres of mercury was sufficient to cause the entrance of air into the cavity; and that during the act of swallowing a pressure of 20 millimètres or less is sufficient.

He has lately (*Archiv für Anatomie und Physiologie*, Leipzig, 1877) had the advantage of making some experiments in the pneumatic cabinet of the Jewish hospital. This cabinet is so arranged that any desired pressure within a certain limit can be made, and the amount measured by means of a conveniently placed quicksilver manometer. The results of these observations are as follows.

After entering the cabinet, if the act of swallowing be avoided, a feeling of pressure is experienced on the membrana tympani, with a pressure of from 10 to 40 millimètres, which on the increase of the pressure from 40 to 80 millimètres, becomes painful. When this was passed, Dr. Hartmann was compelled, on account of the pain, to take refuge in the act of swallowing. Before the swallowing, the membrane is congested and pressed inwards; but, on swallowing, it is placed in a condition to be able to return to its normal position, since the equilibrium between the air of the cabinet and the tympanic cavity is again restored. This at once relieves the pain.

From experiments made in relation to the amount of pressure required to cause entrance of air into the cavity, he concludes that by Valsalva's method of inflation no actual position of rest of the muscular

structure of the tube is reached, but that, during the inflation, only a more easy access is given to the passage of air through the tube. The exit of air from the cavity requires less change of pressure than for the entrance; and Dr. Hartmann assumes that the tube acts as a valve, which opens towards the naso-pharyngeal cavity, while by heightened pressure in that cavity it remains closed. Vocalisation causes, like Valsalva's method, changes which allow an easier entrance of air into the cavity, but the act of swallowing is the only method of restoring the equilibrium between the tympanic and pharyngeal cavities.

MOOS ON A CASE OF TREPHINING OF AN EXTERNAL MEATUS CLOSED BY BONY DEPOSIT.—In Virchow's *Archiv*, vol. lxxiii, 1878, Dr. Moos of Heidelberg relates a case of acute inflammation of the right external meatus, causing osseous occlusion of the canal. The deafness was great. There was no tinnitus, and affection of the acoustic was negated. Believing from the character of the auscultatory sounds, that the obstructive mass was not extensive, trephining was determined on, and this was effected by means of a drill of two millimètres in diameter; but not till a canal seven millimètres in length had been made. The result was very satisfactory, the hearing being restored nearly to the normal degree; and, when the patient was seen two months afterwards, there were no symptoms of a return of the affection.

W. LAIDLAW PURVES.

#### RECENT PAPERS.

- On Linear Cauterisation of the Eyelids in Blepharospasm and Entropion. By MM. Routier and Arnozan. (*La France Médicale*, March 6 and 9.)
- Report of one hundred Cases of Diseases of the Ear. By Dr. J. K. Duncanson. (*Edinburgh Med. Journal*, March.)
- On Tenotomy of the Tensor Tympani. By Dr. C. Nicot. (*Le Progrès Médical*, March 9.)
- Unilateral Temporal Hemipia: Phosphaturia. By M. H. Coursserant. (*Gazette des Hôpitaux*, March 23.)
- Wounds of the Eye; Enucleation; Removal of the Anterior Hemisphere; Ocular Prothesis. By M. Badal. (*Gazette des Hôpitaux*, March 28.)
- Immediate Consequences of a Slight Wound of the Eye. By Dr. Grand. (*Lyon Médical*, March 31.)
- Further Researches on the Quantitative Determination of Chromatic Vision. By Dr. Dor and Dr. Favre. (*Lyon Médical*, April 7.)
- Case of Chronic Dacryocystitis Complicated with Capillary Fistula. By M. Badal. (*La France Médicale*, April 6.)
- The Incurability of Congenital Colour-Blindness. By Dr. B. J. Jeffries. (*Boston Medical and Surgical Journal*, March 28.)
- Contribution to the Pathological Anatomy of the Eye. By Dr. J. Hirschberg. (*Berliner Klinische Wochenschrift*, May 6.)
- The Visual Acuteness in Ametropia of High Degrees. By Dr. S. M. Burnett. (*American Journal of Medical Sciences*, April.)
- Exostosis of the Auditory Meatus: Death from Meningitis. By Dr. J. O. Green. (*Boston Medical and Surgical Journal*, April 18.)
- Otorrhœa Followed by Abscess of the Brain. By Dr. D. Barduzzi. (*Lo Sperimentale*, April.)
- On Sympathetic Ophthalmia. By Dr. Schweigger. (*Berliner Klin. Wochenschrift*, May 20.)
- On Unilateral Paralysis of Accommodation, with Mydriasis of Syphilitic Origin. By Dr. Alexander. (*Ibid.*, May 27.)
- On Purulent Blerorrhagic Conjunctivitis and its Treatment by Instillations of Alcohol. By M. Gosselin. (*Recueil Ophthalmologique*, April.)
- On Amblyopie and Toxic Amauroses. By Dr. Galezowski. (*Ibid.*)
- On Keratotomy. By M. Mengin. (*Ibid.*)
- On a Cause of Error in the Measurement of Myopia by the plan of the reversed Image. (*Ibid.*)
- Essay on the Physiology of Reading. By M. Javal. (*Annales d'Ophtalmologie*, March-April, 1878.)
- Considerations on the Etiology and Treatment of Glaucoma. By L. A. Wecker. (*Ibid.*)
- On the Treatment of Dacryocystitis, consecutive on Stricture of the Lachrymal Glands. By Dr. Coursserant. (*Journal des Connaissances Médicales*, May 15.)
- Fracture of the Bony Meatus Auditorius by a Kick. By Dr. Jacobasch. (*Berliner Klinische Wochenschrift*, June 3.)
- Malignant Oedema of the Eyelids. By Dr. Guyon. (*La France Médicale*, May 22.)
- Contribution to the Study of the Treatment of Foreign Bodies in the External Auditory Meatus. By Dr. Bourgeois. (*Bulletin Général de Thérapeutique*, April 30.)



## PSYCHOLOGY.

BERTHIER ON A COMPLEX AND EXCEPTIONAL NEUROSIS.—Dr. Berthier relates the following case in the *Annales Médico-Psychologiques*, September 1877. The patient was a young girl, aged 13, of a scrofulous tendency; a very timid child, who had not been able to speak until she was five years of age. Her father had suffered from nocturnal somnambulism, and her maternal grandfather from paralysis. When about 13 years of age she had an attack of vomiting, with gastric pain, but no head symptoms. After two months the complications which had supervened led to Dr. Berthier being called in consultation. The patient suffered then from general delirium with hallucinations; she was excited, trembling and gesticulating, her body was in a sweat, the pupils were dilated, the pulse quick and strong. Tactile sensibility was equally distributed. The urine was abundant and limpid, the bowels constipated. She had never menstruated. She did not seem to see Dr. Berthier.

I left, says Dr. Berthier, and visited her again in an hour. She then recognised me from time to time, and again seemed not to see me, she wished me good day, and slowly became able to converse. Sometimes she saw me, at other times she seemed blind; sometimes she heard what I said and smiled, at others she remained deaf to me. Her skin was anæsthetic on one side of the body, and on the other was excessively sensitive. Again she did not seem to have the full power of the senses of sight and hearing. Thus she could read from a newspaper, but failed to see the hand which held it; she heard the songs of birds, but did not distinguish our voices. If the curtains were closed and the room darkened, she was able to see a pin on the table, but failed to distinguish us as present. I seated myself by the bed, and this child, generally so timid, was quite possessed, and chattered to herself constantly, using the words *pouff* and *conseil*, the first to indicate herself and the second other persons. Thus she recounted what "*Conseil*" Berthier thought of her state, how many visits "*Conseil*" curé had paid her, how good "*Conseil*" grandmamma was to her. She turned over the pages of an album, and criticised the portraits with much justice and some malice, and although ordinarily thought to be dull and not very intelligent, she read one of La Fontaine's fables in a spirited manner and with correct accent. She also declaimed from Racine with an art and a diction worthy of a first-rate actor. I proposed a game of chess; she accepted, and played very well, but quite as though she were alone and her adversary invisible. Then quite suddenly, after this state had lasted several hours, she uttered a cry, placed her hand on her heart, shed tears, looked around her, asked where she was, and who had brought her there. She knew nothing of what had taken place, and seemed as one awakened from a dreamless sleep. I have been present during many of these attacks; I have also seen her in a true somnambulist state, during which she has cooked, put the room in order, and hung up a clock against the wall without stumbling or hurting herself in any way.

I have seen her take up my hat, observe the ventilator, and exclaim, "What a strange idea that *Conseil* Berthier should bore a hole in his hat", and, laughing loudly, "It is his hat; I see his initials; I will ask him the use of it when he comes." All the

time I was standing by the bed, and she did not perceive me. Once we held a long conversation by the aid of a slate; she read what I wrote, but would not admit that the writing was done by me. Sometimes this singular blindness would give place to hallucination. At another time she could only see persons as being covered by a black cloud, so that she could not recognise them; and if asked who questioned her she attempted to recognise them by putting her hand on their face, hair, clothes, etc., after the manner of a blind person. The transition from these states, to that of the normal life was very rapid, and could not be predicted by more than a few moments. She complained of a pain in the præcordial region when about to return to the normal state, and the sudden appearance of the words *pouff* and *conseil* in her conversation indicated the presence of the abnormal state.

In addition to these symptoms the feet were often paralysed, the appetite *nil*, the sleep light, the pulse very irregular, the body emaciated, face pale, and there was a febrile brightness of the eyes. One morning she was found to be menstruating for the first time, and two days after this the somnambulism had ceased, but was replaced for a time by an embarrassment of speech with an impossibility of pronouncing certain words. She was removed to the country for change and became much better, although she suffered two or three relapses after great emotion excited by visits to Paris.

Dr. Berthier remarks that he has never met with any case similar to this. The remarkable fact in the case is the partial way in which the senses were exercised, taking cognizance only of portions of objects, sounds, etc. The rapid alterations from the normal to the morbid state, and the complete unconsciousness of what had taken place during the morbid condition, are also extraordinary phenomena. The difficulties attendant upon puberty in a young girl of slow growth, and under the domination of hereditary nervous influences, together with the almost total disappearance of the symptoms upon the establishment of menstruation, are perhaps sufficient to establish a connection between the phenomena; but Dr. Berthier will not hazard any hypothesis upon a single case of so complex a character.

CHARLES ALDRIDGE, M.D.

SMOLER ON A CASE OF CYSTICERCI IN THE BRAIN.—The following case is related by Dr. Smoler in *Betz's Memorabilien*, xxiii Jahrgang, 3 Heft.

Rosa D., a widow, aged 47, was admitted on April 20th 1877, into the asylum at Prague, suffering from epilepsy with maniacal excitement. Until 43 years of age she had enjoyed excellent health; at that time her husband met with a violent death, and the patient had since been silent, depressed, and retiring. On the anniversary of the funeral she visited the grave, and was there attacked by epileptic fits. From this time the attacks became periodical; in the intervals the patient suffered from headache, giddiness, etc. After a time maniacal attacks, in which she became very violent and dangerous, followed the epileptic seizures, so that asylum treatment became a necessity. Hallucinations of sight and hearing were observed during the paroxysms. The family history was very good, except that one of the patient's sisters was also epileptic; and was said to have become so owing to grief at the loss of her eyesight.

On admission, the patient appeared either quite regardless of her surroundings, or was anxious and

depressed; she answered questions slowly, had quite forgotten how to write, and almost how to read; altogether her intellect was greatly weakened. After the epileptic fits she became greatly excited, and, under the influence of her hallucinations, attacked persons and destroyed property all around her. Only occasionally was there no maniacal attack after a fit. After a time a severe pleurisy was developed on the left side; during its course of several months the fits were very few and slight, not being followed by excitement. The prognosis as to life was now considered to be unfavourable, for it was supposed that tuberculosis would ensue, and, by increasing the frequency and severity of the fits, prove fatal. In February 1878, the patient died from a succession of fits.

At the necropsy a number of small cysticerci were found in the cortex of the cerebral hemispheres; they were most numerous in the anterior lobes, and in the most anterior parts of the anterior and posterior central convolutions. One cysticercus was found in the grey matter of the right optic thalamus, and others in the left striate body. The left pleura was adherent throughout, the right quite free; the left lung was very small: the lower lobes of the lungs were oedematous; the bronchial mucous membrane was very red. Small cysticerci were observed on the external surface of the heart, in the right pleura, both lungs, both kidneys, the liver (?), and both deltoid muscles.

The cysticerci in this case were not diagnosed; the mental disturbance and the epilepsy seemed to be distinctly due to the patient's grief at her bereavement; some pains in the arms from which she suffered for some time also dated from an injury to the arms, which had been caused by the unskilful application of a strait waistcoat. A report of the case of this patient's sister would be most interesting; it is more than possible that she also is the subject of cysticerci, having become epileptic late in life after the loss of her sight. It is probable that in the present case the patient might never have become either insane or epileptic, notwithstanding her grief, had not the latter acted upon a brain already predisposed to disease by the presence of cysticerci. On the other hand, the parasites might have brought on both epilepsy and psychosis without the action of grief as an exciting cause. No external influence is sufficient to cause insanity, unless the nervous centres be predisposed by some other cause. This predisposition is either congenital or acquired; it has been ascribed by some to a peculiar condition of the vessels of the brain, and by others to the state of the nerve tissues; it is often caused by acute diseases. There are few insane persons who have not suffered from typhoid, relapsing, or other fever. It has long been observed that these diseases gave rise to a special predisposition to neuroses or psychoses, but of late years it has been discovered wherein this predisposition consists. In 1860 Riedl stated that typhoid fever, when accompanied by severe cerebral symptoms, laid the foundation for the development of new connective tissue formations in the brain. Quite recently Popoff has shown the existence, in twelve cases of enteric fever, of a small-celled infiltration of the brain-substance; this was most abundant in all the layers of the cortex and in the perivascular spaces along the course of the vessels; it was also partly associated with commencing inflammatory changes in the ganglion-cells. Changes in the brain or spinal cord have been observed by Westphal after small-pox; by Oertel after diphtheria; by Delieux

de Savignac after dysentery; by Jaccoud and others after rheumatism. Psychoses and neuroses occurring, therefore, after these and other diseases are no longer regarded as purely functional, inasmuch as a physical condition causing a tendency to disease has been shown to exist. Dr. Smoler believes similarly that cysticerci in the brain give rise to a condition of increased susceptibility to the action of external influences, which latter would then more easily and more certainly cause a neurosis or psychosis than they would in a person not possessing such individual predisposition; also that cysticerci, especially when in large numbers, may of themselves be sufficient to cause disturbances of nervous and mental function.

The cessation of the fits during the attack of pleurisy is also noteworthy; many diseases (*e.g.*, typhoid fever, pleurisy, pneumonia, dysentery, erysipelas) seem to have the effect of temporarily lessening the frequency and severity of the convulsions; but, as is the case with many remedies, the fits which have been staved off for a time often recur afterwards in very rapid succession, and with a fatal result. The occurrence of tuberculosis seems especially apt to lead to such a termination.

**KELP ON DOMINATING IDEAS.**—In Betz's *Memoabilien*, xxiii Jahrgang, 3 Heft, is a very interesting paper by Dr. Kelp on "*Zwangsvorstellungen*," a word for which it is difficult to find an English equivalent, but which may perhaps be rendered "compulsory ideas", or "dominating ideas". By these are signified ideas or fancies which, occurring in an otherwise healthy mind, and not being due to any sensory or affective condition, yet, in direct opposition to the will of the person affected, press themselves into the foreground of his consciousness, cannot be shaken off, hinder and confuse the normal current of his thoughts, though they are recognised by him as being abnormal and foreign. These morbid ideas never become genuine delusions, they never assimilate to themselves all the patient's previous thoughts and ideas as occurs in other mental diseases, but they continue to stand out in distinct opposition to the patient's healthy consciousness. Yet the patient is unable to combat them; he rather follows them helplessly, complaining of his fate, feeling very unhappy, and praying his physician for deliverance. Cases of this kind are rare; in twenty-four years' lunacy practice Dr. Kelp has seen only two such. The first is especially noteworthy.

**CASE I.** A healthy girl, aged 20, whose father was a drinker, and whose brother was epileptic, but in whose family no further trace of insanity existed, was suddenly seized with the idea that she had with a knife cut off the head of an old woman whom she had, in fact, visited upon her death-bed a short time before. This idea prevented her from having any rest day or night; she could not rest in bed, and was unable to employ herself in any way during the day. The arguments that such a deed was an impossibility, that she would at once have been discovered by the relatives of the dead woman, and would have been put upon her trial, did not avail to cure the otherwise intelligent patient of her delusion. She persistently demanded the exhumation of the corpse that she might convince herself of the groundlessness of her fear, and she wept bitterly when this had to be denied her. Her condition of restlessness and anxiety became so much worse that she had to be removed to Dr. Kelp's asylum; no favourable result was attained there during a year and a half's treatment. The patient had a feeling of constriction



in the neck, and throbbing of the carotids; occasionally also hallucinations of hearing came on. She was mentally quite clear on all other points, and recognised her morbid sensations and ideas as such. Long-continued injections of morphia, the administration of bromide of potassium, and the application of the constant current to the neck, caused some improvement in some of the symptoms. Removed to her home again, her condition remained unchanged, but she renewed her entreaties for the exhumation of the body of the woman whom she supposed she had murdered. In the hope of curing the unfortunate girl, the necessary consent of the authorities and of the old woman's friends was at last obtained, and the exhumation actually took place one night; after having looked at the corpse the patient expressed herself quite convinced that the old woman had died a natural death. Improvement and recovery took place from this time to such purpose that she soon married happily, and has since remained mentally well. It is universally admitted that such an experiment as proved successful in this case cannot cure a fixed delusion nor a case of delusional insanity. The author considers that the terrifying nature of the secret nocturnal scene at the exhumation exercised a beneficial effect on the patient's mind, as if she had to some extent been brought to her senses by receiving a good mental shaking.

CASE II. An educated maiden lady, aged 36, of psychopathic disposition, whose mother was very hysterical, and whose uncle was epileptic, had already suffered for a long time from the idea that she carried needles and poison about with her, with which she might harm others. This delusion dominated her whole existence in a marked way. Whenever she passed near a room where a photographer worked, she fancied that poison attached itself to her clothes; the presence of an artist disturbed her, for she imagined that portions of poisonous colours might have become detached. She also trembled at the very idea that she might from any cause be carrying needles about on her which might possibly get into food and do mischief to others. She repeatedly consulted Dr. Kelp, but all his arguments could not free her from her morbid ideas. For some years the patient's condition varied little; change of scene seemed to produce temporary improvement; she eventually became so restless and excited as to necessitate her removal to the asylum; she had one night washed her hands for hours together to free them from the supposed poison. In the asylum she became quieter, nearly always employed herself, slept well, and took an interest in all that went on. Every now and then, however, she was still troubled by her anxiety and fear of poison; she would go crying to her room and wash her hands for a long time, fearing that she might have taken up some poison in passing the asylum dispensary. She was discharged, but soon became so excited at home that she had to be readmitted. Recovery is probably not to be hoped for in this case; but asylum treatment and discipline effected great improvement, and rendered the patient's condition much more tolerable to herself. Such cases should, therefore, not be refused admission simply because regarded as incurable, though Westphal considered that the monotony of asylum life was injurious to this class of patients as a general rule. Dr. Kelp agrees with Westphal that this disease has no truly progressive character, that is to say, that no fear need be entertained of its developing into true delusional insanity, or of its leading to general weakness of intellect,

however severe may be the symptoms, or however long their duration. In the above case the intellect remained unimpaired, though the disease lasted several years; in true delusional insanity psychic weakness (dementia) would have supervened. All the patient's mental functions were normal, with the exception of the one dominant idea which she was unable to control.

ACUTE DEMENTIA DUE TO MASTURBATION CURED BY INFIBULATION.—This case is reported in the *St. Louis Clinical Record*. A youth who had hitherto been orderly and industrious, became, at 18 years of age, sullen, careless, disorderly, discourteous, and thoughtless. He was in consequence discharged from his employment, but only became worse while living at home. The patient came under the care of the author at 22 years of age; he had already been treated in one asylum, and had been sent to live and work at a farm without beneficial effect. It would appear that his habits of self-abuse were now for the first time discovered, and that he was in "a demented condition". There was no hereditary taint, and no other cause of insanity than onanism could be detected. The prepuce was perforated on two opposite places by a trocar; two pewter sounds, No. 2, were introduced through the wounds and twisted together like rings. Aperient pills and low diet were ordered.

The succeeding swelling and tenderness effectually debarred the patient from indulging in his bad habits, and he began to complain of pain. On the eighth day after the operation, the swelling was very great, and the patient exhibited marks of bodily suffering. He begged to have the rings removed. There was obvious improvement. The patient commenced to realise his condition. He was, however, still so idiotic as not to adopt the remedy of simply untwisting the bougies and thus relieving himself. On the eleventh day one of the rings was removed; on the sixteenth, a fresh one was introduced at a new place, and the old one withdrawn. In this way, for nearly eight weeks, irritation of the prepuce was kept up, and the patient prevented from indulging in masturbation. His mental condition steadily improved. At the end of the second month he called upon his physician, informing him that he was now well, and that he had that day secured a position as clerk in his old business. "You may now set me free, and remove the metal rings, for I shall not resume my old habits which have brought me to the verge of destruction." The rings were removed, but the patient was kept under observation for many months. He continued to exhibit the external signs of health, physical and mental.

[Noticeable points in this case are the form of the insanity, and the recovery after a duration of four years. Any case is encouraging which shows that masturbation may occasionally be effectually prevented in the insane, especially when recovery from the mental disorder ensues as a result.—*Rep.*]

C. S. W. COBBOLD, M.D.

#### RECENT PAPERS.

- On Paroxysmal Insanity from the Forensic Point of View. By Dr. Ch. Lasègue. (*Archives Générales de Médecine*, Jan. 1878.)  
Goulstonian Lectures on the Localisation of Cerebral Disease. By Dr. Ferrier, F.R.S. (*British Medical Journal*, March 23, 30, April 6, 13, 20, 27.)  
Pathological Illustrations of the Localisation of the Motor Functions of the Brain. By Dr. R. Atkins. (*British Medical Journal*, May 4 and 11.)  
Sequel of a Case of Abnormal Disposition to Sleep, alternated with Choreic Movements. By Dr. W. T. Gairdner. (*British Medical Journal*, May 4.)

## REPORTS OF FOREIGN SOCIETIES.

### SEVENTH CONGRESS OF THE SOCIETY OF GERMAN SURGEONS.

(Continued from page 226.)

*Resection of the Elbow-Joint.*—Dr. Vogt (Greifswald) showed a patient, aged 15, on whom he had performed resection of the left elbow-joint two years previously. He pointed out that both the form and the function of the joint had been perfectly restored, and remarked that the case was further of interest, inasmuch as the operation had been performed from a purely functional indication. While engaged in gymnastic exercises, the patient had dislocated both bones of the forearm outwards, and fractured the internal condyle of the humerus. The dislocation was not reduced, and the limb became ankylosed in the straight position. Hitherto, the want of any means of assuring the restoration of the normal function had stood in the way of the more general adoption of resection of the elbow-joint on purely functional grounds. Surgeons had often to be contented, in cases of ankylosis in the straight position, with simply procuring ankylosis with the arm at a right angle, a result which was only that of forced fracture; there was not much fear of producing a loose joint in young individuals. If it were desired to obtain after resection a movable joint capable of performing its functions, a necessary condition was the restoration of the normal form of the new articular surfaces. The operation in the present case was performed in the manner advocated by Dr. Vogt at the fifth Surgical Congress, two years ago. The elbow-joint was exposed by two parallel longitudinal incisions in front of the internal and external condyles. An incision nearly two and a half inches long was carried along the anterior border of the internal epicondyle; the soft parts were somewhat raised, and, by means of a mallet and chisel, the insertions of the flexor group of muscles along with portions of bone were separated; the soft parts and periosteum were then raised, and the internal lateral ligament was divided. In like manner a longitudinal incision was made through the soft parts in front of the external condyle, extending downwards to the head of the radius and upwards to the shaft of the humerus; the insertion of the extensors to the external condyle, with the periosteum and the attached laminae of bone, were then separated by means of the chisel; the separation in all directions was then completed by the elevator; the head of the radius was sawn off and removed; and the articular end of the humerus was divided transversely above the condyles by the saw. The soft parts were now pushed back, and the insertion of the triceps, with the periosteum and attached bone, was removed by means of the scalpel and chisel from the olecranon; the ulna, with the movable articular end of the humerus, was now pushed somewhat forward; the coronoid process was laid bare, and the separation of the articular end of the humerus was completed by means of the saw. By this modification of the ordinary subperiosteal resection, the insertions of the muscles into the condyles and olecranon were preserved. Antiseptic dressing was applied, and the arm was laid on a rectangular wire-splint. In fourteen days the operation-wound was nearly healed; and, when the dressing was removed in the

third week, the newly formed and firm bony structures already allowed movements, and soon afterwards active motion. The arm was put up in a jointed silicated dressing, and was exercised in flexion and extension by loading the hand, at first with light, afterwards with doubled weights. This exercise, in conjunction with active exercise of the muscles, was rendered possible by the preservation of the muscles, and the early reproduction of the bones in the parts concerned; and in this lay the guarantee for the restoration of the function and form of the new joint. It is necessary in such cases, Dr. Vogt observed, not only to adopt methodical movement at an early period, and carry it on throughout the whole after-treatment, but to exercise a certain amount of energy in the movements, so that under pressure and traction the articular surfaces may assume the normal typical form.

*Excision of the Hip-joint.*—Dr. Schede (Berlin) said that, at the meeting in 1877, he had recommended that, in a certain class of cases, resection of the head of the femur should be done by means of an anterior longitudinal section, *i.e.*, by simple decapitation. The result of this proceeding appeared to be better than that of any other method. He showed a boy, who, a year previously, had suffered for twelve weeks from inflammation of the hip-joint, which was followed by shortening to the extent of 3 centimetres (1.2 inches). The epiphysis became separated, the head of the femur was fixed in the acetabulum, and the neck of the bone was displaced. The head was removed from the acetabulum, and the neck replaced in position. The result was excellent; the limb that had been operated on became so strong that the boy could hop on it, and its mobility was almost normal. Another case, which he showed, was one of resection of the hip-joint in consequence of suppuration following infective osteomyelitis of the ileum. The part healed with the exception of a narrow fistulous opening leading to the internal iliac fossa, the remains of the original osteomyelitic abscess. The joint itself was perfectly healed, and was capable of pretty free motion. In this method of operation, according to Dr. Schede, the thigh gains a firm hold in consequence of the upper end of the neck being supported against the edge of the acetabulum. When the neck of the bone is destroyed, the anterior incision affords no advantage. In consequence of the small amount of shortening, the patients walk almost without limping. With regard to such a result, it is not desirable, even when the longitudinal incision is made from behind, to remove the trochanter; its extreme point alone should be taken away. The escape of the discharges from the wound is generally easily secured. In the after-treatment, and even after the wound was healed, it is necessary to abduct the thigh strongly. Taylor's splint is objectionable, as the extension of the limb interferes with the friction necessary for the firmness and formation of the joint; a simple apparatus is sufficient.—Dr. Hüter (Greifswald) had had very good results from simple resection of the head of the femur without removal of the trochanter major, without making Schede's anterior incision. He had several times lately practised the latter, carrying it, however, a little outwards, so as to bring it over the outer edge of the sartorius muscle. When necessary, the discharge from the wound was regulated by making a button-hole opening and applying a drainage-tube.—Dr. von Langenbeck was glad that the idea of removing the head of the femur alone, when the disease was confined to this part, was gaining



ground. In reference to this point he called attention to Heine's preparations from experiments on animals, in the Würzburg museum. He remarked that, after subperiosteal resection, although the joint might be movable at first, ankylosis might follow. Schede's incision was, he thought, not practicable in most cases, and was suitable only for cases of separation of the epiphysis, spontaneously or by gun-shot injury.—Dr. Hüter said that a patient on whom he operated in 1869, being then a boy, now had no ankylosis; this did not therefore occur in all cases without exception.—Dr. Petersen (Kiel) had operated successfully by Schede's method on a girl eight years old.—Dr. Pauly (Posen) also related a case.—Dr. Szmula (Zabrze) reported a case of resection of the hip-joint performed in 1870 in consequence of gun-shot wound, with good functional result.

*Club-foot.*—Dr. Schede showed a case of congenital club-foot, in which he had removed a wedge-shaped portion of the tarsus with successful result.—Dr. Mensel (Gotha) also showed a similar case, in which tenotomy had been performed a year previously in Jena. Through neglect the operation had failed, and he had removed, with excellent result, a wedge-shaped portion of the bone close in front of the ankle-joint. This was easily done, but care must be taken not to remove too much, as otherwise the foot would be too short. He had not divided the tendo Achillis in his case before operating; this had been done twelve years ago in Jena when his patient was a year old.

*Ankylosis from Rheumatic Arthritis: Resection.*—Dr. Schede showed a young woman who had been the subject of bony ankylosis of both knees, ankles, elbows, and wrists, in consequence of polyarthritis. He had endeavoured to restore the utility of the limbs in some measure by resection (with the exception of the knees, which were ankylosed in a good position). He operated on the wrist by the dorso-radial incision, which was perfectly sufficient, although the forearm, carpus, and metacarpus were fused together. The lower ends of the radius and ulna, the whole carpus, and the bases of the metacarpal bones, were removed. The left hand, which was first operated on, was capable of free and powerful active movement; in the right hand the power of active movement was less, but the joint was firm and of almost normal configuration; the left elbow-joint had again become ankylosed, but the right had pretty good power of motion. On the whole, the mobility was great in proportion to the extent of the parts removed. In the elbows the power of motion had become less than at first. The ankle-joints could be moved to a limited extent. The patient was able to walk on crutches, which she could not do before the operation; she could feed and in great measure clothe herself, and was well satisfied with her present condition as contrasted with her former state of helplessness.

*Abnormal Length of the Radius.*—Dr. Güterbock (Berlin) showed a girl seven years old, who had been the subject of an abnormal growth in length of the radius after necrosis of the bone. He had removed a wedge-shaped piece from the convexity of the curve. The result was the restoration of all the functions of the limb, supination becoming perfectly possible.

*Inflammation of Bone.*—Dr. F. Busch (Berlin) exhibited a large number of preparations illustrating inflammation of bone in dogs. They showed the different degrees and form of necrosis, induced in some cases by the galvanic cautery, in some by the introduction of laminaria, and in others by the action

of chemical agents on the medullary canal. He said that the application of chemical substances to the medullary canal required some caution. If the canal were opened and they were injected, a part of the injected material passed through the vessels in the Haversian canals into the general circulation. He had found in 1865, in making researches on fatty embolism, that, when large quantities of olive-oil were injected into the medullary cavity, obstruction of the pulmonary cavities was produced, and the animals died of asphyxia. Recently, Riedel had injected nitric acid into the medullary cavity, and had seen inflammation of the pulmonary vessels and heart produced by the passage of the acid into the blood-stream. These inconveniences were avoided by Dr. Busch in the following manner. He perforated the tibia down to the medullary cavity in two places, and destroyed the marrow by means of a strong iron wire, so as to produce an extensive wounded surface. He then introduced a fine iron wire through one hole and brought it out at the other. To one end of the wire he fastened a short cotton-thread (four- to eight-fold) which he impregnated with the chemical agent to be used, and drew it slowly through the cavity. He had hitherto used only some of the strong ethereal oils and sesquichloride of iron. He had also applied putrescent fluids to the medullary canal in the same way. In the one case, in which he had experimented in this way, and subsequently laid the bone open, there was but very slight reaction. Eight days later, he operated in the same way on the tibia of the other leg, and closed the perforations with plugs of wood; acute sepsis followed, of which the dog died in six days. This showed the importance of allowing a free outflow to the discharges in cases where putrefaction was going on in the medullary cavity. Ollier had, in 1876, in a paper read before the French Academy, advocated the opening of the medullary cavity in cases of acute osteomyelitis.

*Fracture of the Patella.*—Dr. Trendelenburg (Rostock) showed a man who had fractured his patella transversely about eight weeks before he came under notice. The fracture had been united by a broad ligamentary band. On February 9th, Dr. Trendelenburg freshened the broken surfaces of the bone, and united them by three silver sutures and one catgut suture. Antiseptic spray was not used, but the after treatment was antiseptic, and there was little reaction. At the time of the report there was perfect bony union.

*Oblique Fracture of the Lower End of the Femur.*—Dr. Trendelenburg related a case of oblique fracture of the lower end of the femur extending into the knee-joint in a man aged 56, in which a false joint was the result. The joint was exposed by Langenbeck's inner semilunar incision, as in resection. It was found that the pseudarthrosis was caused by the impaction of a small piece of the capsule of the joint, and this had to be removed before the bone could be united by means of ivory pegs. There was considerable hæmorrhage, and fifty ligatures were required. Healing took place by the first intention; and, with the exception of a small projection at the part where the pegs had been inserted and slight interference with extension, the appearance and function of the limb were normal. He suggested that, in cases of intracapsular fracture of the neck of the femur, the bone might be exposed and ivory pegs applied.

*Genu Valgum: Ogston's Operation.*—Dr. Riedinger (Würzburg) described two cases of knock-knee

operated on according to Dr. A. Ogston's method, and showed photographs. He followed Dr. Ogston's directions as closely as possible. He did not recommend rendering the limb bloodless by Esmarch's method, as in his first case, in which he followed this plan, the subsequent hæmorrhage was considerable. At first he applied a plaster of Paris bandage, but found that this soon became useless through absorbing blood and the secretions of the wound; he afterwards applied an iron splint, which he preferred for fixing the limb. After the healing of the wound, considerable stiffness of the joint remained, but could be overcome by various movements; in his first cases, adhesions had to be broken down during narcosis. The ultimate result, as regarded function, was excellent. He said that Ogston's operation was not unattended with danger, though not more than other operations of osteotomy, and that antiseptic precautions were necessary.—Dr. Thiersch (Leipzig) said that he had performed Ogston's operation six or seven times, and that Nussbaum had done it in fourteen cases. In one case the patient died six weeks after the operation, from acute uræmia from contracted kidney; and he was therefore able to show a very interesting and rare specimen. The inner condyle of the femur was pushed up to the extent of about a centimètre, and between it and the outer condyle was a cleft about half a centimètre broad, filled with coagulated blood. The cartilaginous epiphysal line was very wide, the individual being rickety, and had been apparently displaced by the operation. Dr. Thiersch expressed a fear that the interruption of the epiphysal cartilage in Ogston's operation might easily interfere with the growth of the bone.—Dr. Kolaczek (Breslau) exhibited a baker's apprentice, aged 17, on both of whose knees Ogston's operation for genu valgum had been performed simultaneously, Dr. Fischer operating on one knee and Dr. Kolaczek on the other. The result of the operation, which had been performed ten weeks ago, was good, but the right knee could only be bent to a right angle. The operation was performed without spray, but with strict antiseptic precautions in other respects. Air, however, which had not been disinfected, accidentally entered the joint during the operation, but no harm followed. The reaction was almost *nil*; the dressing (Lister's) was removed on the twelfth day, and a flannel bandage was applied; at the end of four weeks the patient was allowed to try to walk. At the time of the report the patient could walk considerable distances without support, though with a little difficulty. The deformity had commenced when the patient was in his ninth year, and had increased until the right leg formed an obtuse angle of about 150 degrees, and the left one of 160 degrees. Speaking of the entrance of air into the joint, he said that he had seen it a year and a half ago in a case of removal of a loose cartilage from the knee; here also the subsequent progress, under the open treatment, was faultless. The antiseptic spray was not used in Breslau in ovariectomy, and yet Dr. Freund's results left nothing to be desired.—Dr. Heidenhain recommended elastic traction by India-rubber rings both in club-foot and in knock-knee; in the latter, he applied the traction on the inner side of the leg.—Dr. Uhde recommended the use of Adams's saw, and related a case of Ogston's operation which was followed by acute inflammation of the knee-joint. This also occurred in one of Dr. Ogston's cases, but passed off without harm.—Dr. Bardeleben, in the case of a patient aged 33, with a high degree of genu valgum,

had modified Ogston's operation by sawing quite through the condyle and not fracturing it. He would operate under the carbolic spray in all cases.—Dr. Kocher (Bern) showed a photograph of a case (a girl) in which he had removed a wedge-shaped piece of bone.—Dr. von Langenbeck had often seen air enter the joint abundantly after division of the external lateral ligament in cases of genu valgum, without any ill result.—Dr. König had not been able to decide on performing Ogston's operation. Examinations after death had shown him that the deformity was corrected, not by pushing the condyle upwards, but by widening the joint. He feared also the occurrence of arthritis deformans, to which the joints in question were liable.

*Exstirpation of the Larynx: Artificial Vocal Apparatus.*—Dr. George Wegner (Berlin) described the case of a woman, aged 52, who was operated on in September of last year. Tracheotomy was first performed on account of severe dyspnoea; and, the presence of cancer having been detected by laryngoscopic examination, the whole larynx was removed, along with the epiglottis. The patient was now in good health, and showed no signs of a return of the disease. She had used Gussenbauer's artificial vocal apparatus occasionally, and had spoken distinctly with it. She could, however, wear it for only short times, as, in consequence of the fauces being imperfectly shut off from the trachea, portions of food and mucus readily passed into the latter, and interfered with the play of the metallic tongue. The cause of this was probably the removal of the epiglottis, from which proceeding Dr. Wegner would abstain in any subsequent similar operation, unless it were found to be indispensable. Dr. Wegner then showed the action of an artificial vocal apparatus on a girl aged 17, who, at the age of seven, had an attack of diphtheria, which was followed by cicatricial closure of the trachea and complete destruction of the vocal cords. When she was admitted to hospital she wore a tracheal tube, and was quite voiceless. By means of laryngotomy and the use of bougies, the laryngeal passage was made pervious. Dr. Wegner supplied her with an apparatus, which differed from Gussenbauer's in the absence of the tongue-shaped epiglottis, and further, in the circumstance that the voice-tube was introduced first, and then the tracheal tube. With this apparatus she could speak easily and distinctly.

*Muscular Necrosis.*—Dr. Lücke (Strasburg) related the case of a medical student, who, while on the ice on February 10th, slipped and fell. He did not feel any special pain, and no extravasation of blood could be seen. While in bed on the evening of the same day, he was attacked with severe pain in the leg, in the middle of which a small swelling of the size of a cherry was detected. The pain became so severe that Dr. Kohts administered chloral, injections of morphia, ice, etc., but without result. On February 13th, leeches were applied, without relief. On the 21st, Dr. Lücke saw the patient for the first time. The whole leg appeared swollen, and a point at the upper part, between the bones, was very painful, and projected considerably. Percussion showed that the case was not one of osteomyelitis of the tibia; the fibula was inaccessible in consequence of the swelling of the soft parts. An incision was made, and a piece of muscle in a state of waxy degeneration escaped, but no pus, although the tibia was partly denuded of periosteum. The operation was done under antiseptic precautions. On February 23rd, the dressing was renewed, and a small



purulent shred of tissue, which unfortunately was not examined, escaped on pressure. There was moderate and limited suppuration on the 25th. On March 3rd, the temperature was 103.3 Fahr. Several deep incisions were made, which gave exit to pus and to a quantity of offensive gas, which was probably the cause of emphysema which had been observed in the thigh. On March 9th, while the wound was being cleansed, the whole of the tibialis anticus was drawn out; and on the 10th the extensor of the great toe and the common extensor of the toes were removed. These muscles were quite necrosed, and had a peculiar waxy colour. Microscopic examination showed, towards the upper end, small quantities of colouring matter of the blood and crystals of hæmatin. The subsequent progress of the case was very favourable; the patient, however, was obliged to wear an apparatus to counteract the preponderance of the sural muscles arising from the loss of the extensors of the legs. The necrosis was probably due to embolism of the artery supplying the parts. The pulsation in the dorsal artery of the foot remained unaffected throughout.

*The Radical Cure of Hernia.*—Dr. Pauly (Posen) showed a hernial sac capable of containing about two pints of water, which he had removed from a woman aged 43, who had on the left side an inguinal hernia, which could indeed be reduced, but could not be kept up by any truss. The hernia, which had existed nearly thirteen years, reached nearly to the middle of the thigh, and had at its base a circumference of nearly 15 inches. After the replacement of the tumour, the inguinal canal was found to be dilated into a ring which could easily admit four fingers; a pouch as long as the forearm, consisting of skin and hernial sac, remained. Under antiseptics, the hernial sac was extirpated, and the place of exit closed by Czerny's operation, the hernial sac being thus destroyed and the opening closed. Dr. Pauly said that, before applying the ligature to the hernial sac, this should be opened, otherwise, notwithstanding the apparently complete reduction of the hernia, a small loop of intestine might be penetrated by the needle. In the case described, healing did not take place by the first intention, in consequence of insufficient removal of skin in the genito-crural fold. The temperature never exceeded 101.3 Fahr., and there was moderate suppuration. The hernial opening was apparently very effectually closed; but an interval of some years would be required before the success of the operation could be definitely assured.

*Gunshot-wound of the Chest: Resection of the Clavicle and five Ribs.*—Dr. Schneider (Königsberg) related the following case. On October 10th of last year, O. H., aged 21, attempted to commit suicide by discharging a pocket-pistol loaded with two bullets, into his chest, on the left side of the sternum, above the third rib. The opening was four-fifths of an inch in diameter; and there was much laceration of the lung. As sufficient care was not taken to use disinfectants, the effused blood underwent putrefaction, and the hæmato-pneumothorax produced by the wound became converted into an ichorous hæmato-pyo-pneumothorax. There was also sloughing of the injured lung. Septic injection was thus produced, and the patient became pyæmic; rigors appeared on the fourth day after the injury. On October 20, the patient came under Dr. Schneider's care. Thoracentesis was first performed, and a quantity of thin highly offensive fluid was removed from the left pleural cavity; an incision  $1\frac{1}{2}$  inch

long was made between the seventh and eighth ribs. A splinter of the third rib was removed, and the pleural cavity was thoroughly washed out with a solution of carbolic acid ( $2\frac{1}{2}$  per cent.). Through the opening of entrance—which had become much widened—there could be seen the pericardium covering the upper part of the heart, the contraction of the auricles, and the pulsation of the great vessels. As far as the lung could be seen, it was everywhere sloughing; the greater part of the upper lobe was wanting. The subsequent treatment consisted of diligent washing out of the thoracic cavity; the insertion of a silver cannula where the incision had been made; and dressing with carbolised jute. For some days the rigors continued, and the patient's appetite was bad. In consequence of further sloughing of the lung, the posterior wall of the thorax was exposed, and the bullets were detected in it. On moving one of them with a probe, it fell into the thoracic cavity on to the diaphragm, and during the night the other bullet also fell. Chloroform having been administered, the patient was placed on his side, and, the finger having been introduced into the incision-wound, both bullets were hooked out; they lay on the diaphragm. The paper wadding, which had become infiltrated with sanious matter, was also soon afterwards removed. Early in November the necrosis of the lung was arrested, and the patient was free from fever. The remains of the lung gradually contracted towards the hilus; it had a very hard feel, and was connected with firm cicatricial masses of connective tissue. The aperture of entrance of the bullets had contracted to a length of  $3\frac{1}{2}$  inches and a breadth of  $1\frac{1}{2}$  inches. As there was no trace of diminution of the right pleural cavity to correspond with the destruction of a large portion of the lung, and as the patient's strength was failing daily, Dr. Schneider, on December 8th, excised from the second rib 5, from the fourth  $9\frac{1}{2}$ , from the fifth  $9\frac{1}{2}$ , and from the sixth 11 centimètres (2, 3.8, 3.8, and 4.4 inches) at the junction with the cartilages. This extensive resection was not followed by the result which was expected. A week later the lower part of the thoracic cavity began to contract, but the portion above the third rib (where there was no trace of lung) remained unchanged. On January 15th, Dr. Schneider removed (by subperiosteal section, as in all the other incisions) a piece of the clavicle an inch and a half long; by which the left shoulder was approximated to the sternum, and the soft parts in the infraclavicular region were drawn more toward the thoracic cavity. The result was successful. The soft parts in the cavity contracted, the upper part of the pericardium with the great vessels retreated towards the left, and the upper part of the left pleural cavity, which before the resection easily admitted three fingers, at the beginning of March allowed only room for a moderately thick bougie. At the end of March, the whole left pleural cavity was obliterated, and the situation of the aperture of entrance was occupied by a funnel-shaped cicatrix, and a small superficial wound. The resection-wounds healed by the first intention. There was a slight osseous deposit at the parts where the ribs had been excised, and much on the clavicle. The left arm was freely movable, but somewhat limited in function as compared with the right arm. The left clavicle retained its position; the scapula had somewhat sunk; there was no trace of scoliosis. The heart lay almost entirely in the left half of the chest; the apex-beat, which was strong, was perceived in the fifth intercostal space, two centimètres outside the nipple. Cardiac pulsations could be distinctly

seen where the third, fourth, and fifth ribs had been excised.—Dr. Bardeleben said that such cases showed how much man could bear. At Gitschin a splinter of shell had torn away the left side of a man's chest, and his left elbow was also crushed. Tetanus occurred among the wounded; and this man alone recovered, resection of his elbow having been performed.

### IMPERIAL ROYAL MEDICAL SOCIETY OF VIENNA.

March 29. *Treatment of Skin-Diseases by Chrysophanic Acid.*—Dr. Neumann read a paper on the treatment of skin-diseases by goa-powder and chrysophanic acid, in which he referred to the writings of Dr. La Silva Lima of Bahia (a former pupil), and Mr. Balmanno Squire. He had successfully treated cases of psoriasis punctata and guttata with an ointment containing 20 per cent. of chrysophanic acid. In psoriasis orbicularis and diffusa he had also used it with success, but more frequent inunctions were required. In applying it, the scales were first removed, and the ointment was applied by means of charpie. If the skin were much infiltrated, the ointment was applied spread on linen. After three or four applications the scales disappeared, and the part was covered with a layer of exudation. On removing this, the subjacent skin was found to be quite white. After some days, it became pigmented and normal. When there was much infiltration with the psoriasis, ten or twelve inunctions were necessary. In herpes tonsurans and pityriasis versicolor, three inunctions were generally sufficient. He had treated twenty-four cases in all, and warmly recommended the remedy, especially in psoriasis. He showed three patients, the subjects of psoriasis, in two of whom all efflorescence had been subdued, while in a third one upper extremity had been treated with tar, the other with chrysophanic acid, the difference in favour of the latter being remarkable. He also showed a patient in whom he had successfully treated extensive herpes tonsurans with chrysophanic acid. In conclusion, he remarked that this method of treating psoriasis was not radical, but that, as after other plans of treatment, the eruption always reappeared. It could, however, be more quickly and conveniently treated by this than by other remedies.—Dr. Hebra said that he had used an ointment containing only 5 per cent. of chrysophanic acid, but with unfavourable results. Its use appeared to him to be inapplicable to the face, on account of the changes which it produced in the skin and hairs.—Dr. Neumann replied by offering to place some of the ointment which he used at Dr. Hebra's disposal, and asking him to communicate the results obtained. He thought that its application to the face was altogether free from danger.

April 5. *Persistent Membrana Pupillaris.*—Dr. S. Klein showed a young man who had persistent membrana pupillaris in both eyes. He explained this rare condition by a reference to the development of the eye, and distinguished it from the remains of inflammatory processes, membranous deposits on the capsule of the lens, and some forms of synechia, with which it is often confounded. The membrane was very distinct in the right eye, but in the left was much less so. On examination, there was seen to be a delicate transparent membrane of a grey colour, about as large as a moderately dilated pupil. It was connected with the iris by numerous

threads, some very fine, others thicker, partly grey and partly brown, radiating to the ciliary portion of the anterior surface of the iris. The latter did not come into direct contact with the lens-capsule. On closer examination, Dr. Klein found in the anterior chamber a very fine particle lying on the capsule of the lens, which he regarded as a residue of the capsulo-pupillary membrane. The power of vision was equally impaired on both sides, but only slightly. Ophthalmoscopic examination, though difficult, was possible, and showed the fundus to be normal in each eye. The refraction was moderately myopic, both pupils acted freely.

*Hydatids of the Liver.*—Dr. Schrötter exhibited two cases of hydatid of the liver, which were undergoing recovery. He showed the first case at the meeting of November 3rd, 1877. The patient then had a large tumour in the hepatic region, which was diagnosed, by exclusion, to be hydatid. The next day, the diagnosis was confirmed by puncture. Fever then set in, and continued nearly to the beginning of December; it was perhaps caused by an intercurrent disease. On December 5th, the tumour was injected with equal parts of tincture of iodine and water; it diminished, but soon again enlarged. A second injection of 87 grammes of pure tincture of iodine was therefore made on February 22nd. After this, the tumour gradually decreased. Dr. Schrötter remarked that the injection was followed by pain, passing from the liver to the shoulder, where it was so severe that subcutaneous injection of morphia became necessary. On percussion of the liver the day after the injection, he found a tympanic resonance at the seat of operation; and, as no air had been injected, he could only conclude that it was due to the development of gas, as occurs in the injection of thyroid tumours with iodine. A short time afterwards, another case came under his observation. A man had a large distension in the hepatic region; the dullness extended from the fifth rib to a handbreadth above the umbilicus. Fluctuation was not distinct. An exploratory puncture determined the diagnosis of hydatids. On February 22nd, 810 grammes of fluid were removed, and tincture of iodine was injected. The febrile reaction was slight, and the tumour had since steadily decreased.—Dr. Mader recommended the use of Pravaz's syringe in such cases, as being less likely to injure the peritoneum.—Dr. Schrötter said that he had used this instrument, somewhat modified, in puncturing a cyst in the larynx; but he preferred here a middle-sized trocar.—Dr. Weinlechner remarked that the cases required to be watched, to see if the disease returned, as had often been observed to happen after long intervals.—Dr. Schrötter admitted the possibility of a return of the malady, and expressed his intention, in such an event, of allowing the cannula to remain in the sac, so as to excite suppuration. In the meantime, he had employed the mildest treatment, which he had also used in three cases of echinococcus of the spleen, that had recovered.

*The Treatment of Laryngeal Stenosis.*—Although Dr. Schrötter had already made two communications, and published an essay, on this subject, he thought it right to again bring it forward, partly because he had some cases of recovery to relate, and partly to again call attention to his previous advice. He divided the cases of laryngeal stenosis into two groups—one in which the contraction was treated after the performance of laryngotomy, and another in which the danger of suffocation appeared to be imminent, but laryngotomy was not performed.



The first group was subdivided into two sections, according as the stenosis was treated from above or from below. The latter method, which had been carried out by some, but almost always with negative results, he had not practised, because the stenosis formed a canal narrowing downwards towards the trachea. As regarded dilatation from above, the experience of Roux, Depray, Navratil, and Weinlechner had given only partial results. There was some improvement, but no such cure as to allow the removal of the cannula. Dr. Schrötter had many times arrived at this result, and was able to show some cases. The first case was that of a man who had been under treatment from April 1875 to July 1876. Laryngotomy was performed, on account of laryngeal perichondritis. Complete recovery followed; the patient (a teacher of languages) being able to employ himself in instruction for twelve hours a day without any trouble of importance. He spoke aloud and distinctly, and suffered no inconvenience from bodily exertion. The second patient who was shown still wore the cannula, but it had been stopped for some time, and might have been removed, had not the patient objected, on the ground that tracheotomy had been twice already performed on him, on account of sudden paroxysms of suffocation from some unexplained cause; and he was unwilling to expose himself to the chance of a third operation. The patient came under Dr. Schrötter's care in 1873, wearing the cannula; in July 1874 he was able to have the cannula stopped, and it had remained so. His speech was quite intelligible, and there was no dyspnoea. The third case shown was that of a man who had been under treatment since October 1877 for stenosis of the larynx, the result of perichondritis following typhus. For the last twenty days the patient had plugged the cannula; he spoke well, and his breathing was calm. It was necessary for him to continue to wear the cannula, as otherwise contraction would return. His voice was rather hoarse, in consequence of his having taken out the tube for the first time two days previously, which had produced irritation of the larynx. The fourth patient was still under treatment. He could introduce the bougie himself in the manner recommended and described by Dr. Schrötter (see LONDON MEDICAL RECORD, April 15). He next spoke of the treatment of cases of laryngeal stenosis, in which laryngotomy had not been performed. The first attempts of the kind were of old date; in them, however, it was only attempted to insufflate medicines into the larynx and trachea. Desault and Weinlechner had attempted to cure stenosis of the larynx, but without success. Dr. Schrötter had obtained favourable results in the most advanced stages of stenosis. He showed a woman who had suffered from severe stenosis after variola. The patient came under treatment in October 1876, and in April 1877 might be regarded as cured. She also suffered from chronic laryngeal catarrh, and hence was still hoarse. The case was the more interesting, as the stenosis was caused by a cicatricial membrane. Dr. Schrötter showed a drawing, which illustrated the condition at the commencement of the treatment. The glottis was almost entirely occupied by a membrane, and anteriorly there was adhesion of the vocal cords. Following Türck's example, Dr. Schrötter divided the membrane with a knife, and then proceeded to dilate the stenosis. In this, as could be seen by laryngoscopic examination, he had perfectly succeeded. The vocal cords were quite free up to the anterior angle, and, as this condition had already

remained unchanged for some time, re-adhesion of the vocal cords was scarcely to be feared. Dr. Schrötter had also treated successfully a number of other patients, who, however, were not at present in Vienna.—Dr. Weinlechner asked Dr. Schrötter how he would deal with less intelligent patients, in regard to the application of the ring of thread. The experiment was very simple, and could be easily carried out; but he did not think that every patient could do it for himself, like the one who had been shown.—Dr. Schrötter replied that it was necessary not to entrust the patient with his own treatment until the stenosis was cured; and the only object was to prevent a return of the contraction. He had as yet met with no patient who had not learned to introduce the tube. In one case, that of a boy, there was difficulty in the introduction of the tube. A flexible forceps was therefore introduced through the external opening in the larynx into the mouth, and made to seize the bougie. This manœuvre was learned by the nurse.

April 12.—*Cerebral Syphilis*.—Dr. Königstein showed a man aged 33, who in 1868 had condylomata about the anus, and had since suffered from severe febrile paroxysms, with vomiting and headache, loss of smell, and epileptiform attacks. In 1874, he was an inmate of an asylum for three months. In September 1876, he had a sudden attack of diplopia, the cause of which was ascertained to be paresis of the abducent and internal rectus. Complete paralysis of all the external muscles of the eye, and anaesthesia of the right half of the face, followed. In the beginning of January 1877, he reported himself cured, but returned in August in the same state as before. A month afterwards, blindness in the right eye set in; this was followed by keratitis, which left the leucoma now present. The patient was incapable of moving the right eyeball; there was paralytic ptosis; on the cornea, the touching of which produced no reflex action, was a leucoma; the papilla showed distinct white atrophy, and there was commencing atrophy in the left eye. There was also anaesthesia of the parts supplied by the fifth nerve on the right side, and complete loss of smell. Dr. Königstein believed that these symptoms depended on a syphilitic affection of the cerebral arteries.—Dr. Rosenstein spoke of the localisation of the disease, and referred to a case described by Charcot, in which a necropsy was made.

*Primary Sclerosis of the Lateral Columns of the Spinal Cord*.—Dr. von Stöffella prefaced the account of a case of this kind by a historical sketch, in which he referred to the descriptions given by Türck, Erb, Charcot, and others. A woman, aged 78, in 1875 had an attack of pneumonia, from which she recovered sufficiently in three weeks to be able to leave her bed. Three days before, she had felt pain in the legs. This continued to increase during her illness, but at first did not prevent her from walking. The gait then became dragging; the feet seemed to stick to the ground, the knees were kept extended, and the thighs were pressed together. The woman, who was intelligent and cheerful, did not show the least sign of marasmus. After a consultation, she was treated for arthritis deformans, and sent to the baths at Pystian, from which she returned at the end of eight weeks with complete paralysis of both feet. When Dr. von Stöffella saw her, she could not raise the left lower limb at all, and the right only a little. The colour of the skin, the temperature, and sensation were normal; nutrition was not impaired; reflex

irritability was increased. This condition remained unchanged nearly two years; there was no paralysis of the bladder; the muscles were not atrophied; tendon-reflex was very distinctly present in the tendo Achillis and in the tendon of the quadriceps extensor. She died of pneumonia in October 1877. A necropsy was made by Dr. Klob, who found grey degeneration of the lateral columns of the cord in nearly their whole course, but most marked in the lumbar and dorsal segments. The affection extended outwards to the membranes, and backwards to the roots of the nerves.

## REVIEWS.

*The Salt Waters of Kreuznach: a Physiological and Chemical Essay.* By Dr. AUGUST WIMMER. Pp. 27. Kreuznach: 1878.

THIS little treatise is an agreeable contrast to the routine medical guides to Kreuznach and to other baths. It does not give us a mere detail of certain cases of scrofula and bone-affections, of uterine complaints, and especially of uterine and of ovarian tumours cured at that place, the results being ascribed to the action of the bromine and iodine present in its waters, for the Kreuznach waters are not particularly strong as regards the quantity of salt which they contain.

The author at once most properly sets aside the idea of iodine or bromine having anything to do with the efficacy of the waters, characterising it as a "charlatanic recommendation". He then proceeds to consider whether any other agent besides chloride of sodium contributes to work the cures that are effected. This leads him to examine the operation of the chloride of calcium, which is present in the drinking spring of Kreuznach in considerable quantity, but in very much larger amount in the *mutterlauge*, or concentrated solution, which is added to increase the strength of the baths. This *mutterlauge* contains as much as 75 per cent. of chloride of calcium, and only 8 per cent. of chloride of sodium. As the result of experiment, Dr. Wimmer has ascertained that a solution of chloride of calcium is a very strong stimulant to the skin, and much stronger than a solution of chloride of sodium of the same strength. This explains the great increase of the stimulating power of baths strengthened by the addition of the *mutterlauge*, and also accounts for the powerful action of compresses of it, which are of much use as local applications, their stimulating properties being dependent on the quantity of chloride of calcium which they contain, not on the comparatively small quantity of chloride of sodium.

Dr. Wimmer has also made some careful experiments in his own person on the internal use of chloride of lime; and the result of them was this, that chloride of calcium taken in small but continued doses favours oxidation and the absorption of tissue, that it distinctly increases the secretion of urine, and that, taken in largish quantities, it impedes digestion. He considers eight grains of chloride of calcium, taken three or four times a day, a sufficient dose for adults.

Dr. Wimmer has occasionally used chloride of calcium therapeutically, and has been much gratified with the results in four cases of "parenchymatous struma", and in two cases of enlarged gland and one of indurated tubercle, the sequelæ of syphilis. In each of these cases, about five grains of chloride of lime were

given dissolved in water, four times daily, and compresses of a solution of chloride of lime were applied for two or three hours daily. He hopes to make more extended use of chloride of calcium. It will be remembered that at a former period, in the hands of Beddoes and others, chloride of calcium, the old muriate of lime, was a favourite remedy in scrofula, as phosphate is now; and further that the Scotch salt springs, such as those of Bridge of Allan, contain nearly as much chloride of lime as of chloride of sodium, and that small doses of those waters are taken with advantage, although larger ones lie very heavy on the stomach, and no wonder, as a pint of them contains about 34 grains. It is remarkable how little attention is paid in writings on mineral waters to chloride of lime, although the bad effects of sulphate and carbonate of lime are in most of them mentioned, and rather exaggerated.

While we thank Dr. Wimmer for his researches, we cannot help remarking that we wish that his English version of his brochure had been a little less German in its style and phrases.

J. MACPHERSON, M.D.

*The Elements of Therapeutics; a Clinical Guide to the action of Medicines.* By Dr. C. BINZ, Professor of Pharmacology in the University of Bonn. Translated from the Fifth German Edition, and edited, with additions, in conformity with the British and American Pharmacopœias, by EDWARD I. SPARKS, M.A., M.B.Oxon., formerly Radcliffe Travelling Fellow. Pp. 350. London: J. and A. Churchill. 1877.

This should rather be called a guide to the physiological action of medicines, for its specialty is that it is based on modern physiological research. It gives certainly copious lists of preparations, for Dr. Sparks has added those of the American *Pharmacopœia* to those of the British, but very little clinical detail of disease or indication for their use.

To those who know modern work pretty well, or for those who are attending lectures which will amplify the text, it will be an useful book. It alludes to or includes most of modern researches, but can only be considered a text-book or compendium. It is more scientific but less practical than Dr. Ringer's book, and by no means so complete as Garrod, or Scoresby-Jackson, or Bartholow.

We will give a better idea of our subject by a few details and extracts with our remarks. We learn under *aconitia* that its action has been compared to that of digitalin, but the present interest centres in the question whether these drugs are or are not antagonistic to each other. With regard to the therapeutics of aconite, "nothing definite is known about them" (?).

*Morphia* induces sleep, by temporarily paralysing the substance of the brain-cell. It contracts the small vessels; but this would not cause sleep, for with chloral they are not contracted, but more or less congested. Under chloral, however, we are taught that that drug produces sleep *without congesting* the brain, and its action is said to be very similar to that of morphia (p. 33).

*Veratria* often produces complete intermission of fever when quinine has failed. Its effect is probably due to increased arterial pressure, caused by moderate doses, for this promotes loss of heat through the skin.

*Colchicum* is valued in gout, but there are no accurate experiments in proof of its efficacy. It may act



by diminishing the intensity of stimuli that affect peripheral nerves.

*Conia* is a poison to the spinal cord and appendages. It paralyses the muscles through their nervous centres, also the ends of the motor nerves, and it causes complete relaxation of the striped muscular tissue. Applied to the skin, it deprives it of feeling (Guttmann).

*Croton-chloral* is recognised as more correctly Butyl-chloral, and as deeply narcotising the brain, without affecting the functions of the rest of the organism, whilst chloroform and chloral cause general anaesthesia, as well as cerebral narcosis (Liebreich). Von Mering's different conclusions are, however, referred to. The dose mentioned is 0.2 to 0.3 gramme several times quickly, till one gramme has been taken (3 to 5 grains, up to 15 grains). The disagreeable taste and liability to irritation might be mentioned. Under ether, we learn that if the blood be examined after about twenty drops have been taken, the colourless corpuscles are found to be twice or three times as numerous as usual.

The effect of *amyl-nitrite*—viz., relaxation of blood-vessels, is not dependent on the brain or medulla, but mainly upon direct action on the peripheral nerves of the vessels or their coats. Most of us will be surprised to hear that small (?) single doses of *bromide of potassium*, i.e., up to 5.0 grammes (75 grains) produce no effect.

*Caffeine* in large doses poisons, by paralysing the nervous centres and heart. In moderate doses it causes great reflex excitability, and increases the heart's action. The dose is given from 0.1 to 1.3 gramme (1½ grains to 18 grains), but we have more than once observed cardiac irregularity, with temporary intermittence, after doses of one grain.

*Ergot* exerts a primary influence on the tone of the blood vessels, and especially on that of the veins, tending to lower it. The veins become considerably dilated, and extremely congested with blood. The arteries thus emptied contract (Wernich). This view must differ somewhat from the ordinary one, which recommends ergot in varix.

By *strychnia* it is generally supposed that the spinal cord is directly stimulated, but it is possible that the spinal reflex centres are paralysed by it, or that the normal resistance which a stimulus encounters in its transmission from one set of ganglion cells to another is in some way diminished. . . . *Strychnia* improves the acuteness of the healthy eye, and somewhat increases its area of vision for blue and red, but not for white (Cohn); and what has been more recently shown is that by increasing the arterial pressure, it increases the secretion of the mammary gland—in some cases as much as fifteen-fold (Röhrig).

These examples will serve to show the suggestive nature of the book and its modern tone. In the Pharmacy division, the metric system has been retained. We have only to add that it is extremely well translated by Dr. Sparks. We have seldom seen a book done better. E. MACKEY, M.D.

*Chorea and Whooping-Cough.* Five Lectures. By OCTAVIUS STURGES, M.D., Physician to the Westminster Hospital, etc. London: Smith, Elder, and Co. 1878.

This excellent little work is well worthy the attention of the student and the profession. Its design is "to place chorea and whooping-cough in the category of functional derangements". The author, in

his introduction, very properly indicates what he understands by the term "functional", giving as his opinion that the word is both "necessary and expressive", although admitting that by many it "is regarded as an evasive term, useful only as a cloak for ignorance". He points out that we cannot limit our notions of disease to the presence of morbid phenomena, appreciable by the senses. Such a standard would be a constantly shifting one, according to our powers of observation. Moreover, varieties in function itself probably depend on changes in structure, which render the line of demarcation between it and what we call disease impossible.

"Functional disease occupies that interval, which it is the main object of pathology to abridge, between the earliest recognition of disorder to act and the earliest discovery of the structural change on which it depends." In the course of development, each individual undergoes successive transformation, and each period of life is liable to suffer from imperfections, which properly belong to it. It is from these transitions and imperfections that functional disorders arise. These are not necessarily due to structural changes, but are rather the results of inherent defect, of unfinished development, or of that natural incompleteness which we inherit or acquire. Of such conditions, a large number affect the nervous system, due, not to material causes, but to want of control on the one hand or excess of strain on the other. These affections rank as diseases chiefly from their inconvenience and need of correction, although their material equivalents cannot even be conjectured. As examples of such functional disorders, Dr. Sturges takes chorea and whooping cough.

The author's views of chorea are briefly as follows. Chorea is regarded as the result of a mental affection, induced chiefly by painful emotions. Assuming an individual to be naturally impressionable, by which is understood a peculiarity of his nervous system, either inherited or acquired, any sudden or prolonged mental perturbation must exert an influence on the encephalic centres. This, if intense or protracted, must induce a pathological condition, the nature of which we cannot anatomically demonstrate, but which, as a result, develops disordered function. Whether this is increase, diminution, or perversion, depends on a variety of circumstances, such as age, sex, temperature, etc. One of the functions chiefly in this way affected is that of the muscular system. As in health there is a close relation between the mental emotions and muscular contractions, so also in disease; if the former be perverted, the latter will, as a consequence, be abnormal. The nature of the muscular changes resulting from mental perturbations depends, to a great extent, on the age, and consequently the nervous condition of the individual attacked. During healthy infancy, the feelings are expressed by general reflex movements, not directed by any definite purpose. As the child grows older, it acquires the power of expressing itself in speech, and in more suitable actions, chiefly confined to the upper extremities; but these are still unstable. At a later age facial expression comes into play in all the more delicate and complicated muscular movements, which become perfected in adult life. Finally, as old age advances, a retrograde change takes place, and again the movements and actions become unstable. If the centres of the feelings and emotions be disordered, corresponding abnormal muscular manifestations ensue. The same mental cause which might produce convulsions or spasms in an infant might be followed by chorea in a child, hysteria in a young woman,

palsy in an adult, and tumour in the aged. The muscles in these different individuals are variously affected from a common morbid cause, because in health they virtually perform distinct functions, or, at all events, the same functions in a different way. Chorea is the term employed to express the disordered mental and muscular conditions, which result from painful mental impressions, in a child from about four to fourteen years of age.

Dr. Sturges considers these movements neither as convulsions nor spasms; nor are they, as a rule, intermittent or rhythmical. They consist of an exaggeration of the restless and fidgety action, which is the natural condition of a shy and impressionable child. They, for the most part, occur in the most emotional sex, and at that period of life which is characterised in health by unstable and uncertain movements, along with acute sensitiveness of feeling; and they attack those muscles which are the most employed for the manifestation of emotion. Hence, in a very young child, choreal movements are not marked in the upper extremities, while in those of a more advanced age the face and speech are most disordered. The most severe and the most perverted forms of the disease, such as hemichorea, are exceptional, and are probably due to the fact that chorea of itself, by influencing the circulatory condition of the nervous centres, induces unusual complications, in the shape of convulsions and other nervous symptoms. The heart, for example, which is frequently disordered in chorea, need not of necessity be the subject of organic disease, but may be influenced by the general condition of the nervous system, giving rise to irregular and disordered functional action.

In advancing this emotional theory of chorea, Dr. Sturges, as a sequence, does not agree with the hypotheses which are held by many other investigators. He contends against those who are always attempting to find out material changes in such functional disorders, maintaining that many of the anatomical appearances found after death are rather the result than the cause of disease. In discussing the rheumatic theory, it is pointed out that only in a comparatively small percentage of cases could rheumatism be found to co-exist with chorea, whereas in the majority some emotional cause could be shown to have existed. The author believes that, if rheumatism originates chorea, it is rather by the painful mental emotions excited thereby than from that affection, *per se*. In the same way he considers the vascular and embolic theories untenable, and, by very careful reasoning, gives his grounds for that opinion. It is freely admitted that in chorea, as in all other diseases, the ultimate cause is unknown. Dr. Sturges' treatment follows from his pathology. "Chorea being a mental affection, its cure is to be sought in a mental appeal." The large majority of cases recover without medicinal treatment, and the author thinks that no satisfactory evidence has been adduced to prove that the disease is in any way favourably influenced by drugs. At the same time, he "has a belief sufficiently strong" that arsenic has a tendency to hasten the term of improvement.

Whooping-cough also, according to Dr. Sturges, is a purely nervous disease. It occurs at an age when reflex spasms are specially prone to exist, and when the mechanism of respiration is feeble and diaphragmatic. This instability or impressionability of the nervous system existing, any irritation of pulmonary mucous membrane may induce paroxysms of coughing, hence whooping cough is generally a sequence of bronchial or pulmonary catarrh. The

local morbid exaltation of sensibility, thus induced by reflex action, at the same time causes spasm of the diaphragm and constriction of the glottis, the sudden obstructed rush of air producing the sound or whoop characteristic of the disease. The author skilfully marshals his arguments, to show that whooping cough is a nervous and not a zymotic disease. It is contagious, not from any poisonous influence, but only in the sense that many nervous phenomena, such as laughing, yawning, sickness, etc., are propagated from one person to another.

It is not our purpose to debate with Dr. Sturges the different points he treats of in his work, but rather to lay before our readers a brief summary of his views. These, as will have been seen, are chiefly of a theoretical nature, and, as such, are open to difference of opinion. There can, however, be little question that Dr. Sturges has made the most of his case, and has supported his own arguments, and combated those of his opponents, in the most scientific and masterly manner. Notwithstanding the difficult and complex question under consideration, the work is very clear and lucid itself, and in every way its literary merits are unexceptionable. We can conscientiously recommend Dr. Sturges' work to the profession as one of no ordinary value.

A. HUGHES BENNETT, M.D.

*A Manual of Necroscopy; or a Guide to the Performance of Post Mortem Examinations.* By A. H. NEWTH, M.D. London: Smith, Elder, & Co. 1878.

This little manual aims at being a guide to the careful performance of *post mortem* examinations. It is by no means intended as a substitute for larger works on pathology, but embraces in its scope a systematic arrangement of the lesions which may be met with, as also suggestions for the performance of medico-legal examinations. The clear short notes on pathological lesions will appear familiar to all students who are accustomed to the use of the lecture-room note-book, and may be utilised by the busy practitioner as a concise index of conditions which he may meet with in *post mortem* investigations. Considering the restricted limits within which the author has apportioned his task, we consider that he has done his work thoroughly and well.

BEVAN LEWIS.

*Reports on Diseases of the Chest.* Under the direction of HORACE DOBELL, M.D. Vol. III. Pp. 438. London: Smith, Elder and Co. 1878.

Dr. Dobell's Reports have acquired a place in medical literature as valuable books of reference, and we think the present volume excels those which have preceded it both in matter and arrangement. The current literature of most foreign countries, including British Kaffaria, Japan, Russia, Spain, besides America, the Colonies, and the countries of Europe better known to medical science, is fairly represented. The reports are necessarily of very varied character. Thus those of Japan and China, which are at the beginning of the volume, deal largely with the climatic peculiarities of those countries, and the habits of the people in reference to the prevalence of chest-diseases. In regard to the better known European and American States, the recent additions to the literature of each country are alone or principally referred to. Dr. Dobell gives notice that in future the volumes will not be produced annually, "but will appear at such times as the accumulation of important materials may render advisable."



*Auscultation and Percussion, together with the other Methods of Physical Examination of the Chest.* By SAMUEL GEE, M.D. Second edition. Pp. 306. London: Smith, Elder and Co. 1878.

The appearance of a second edition of Dr. Gee's work on auscultation and percussion, thoroughly revised, yet but little increased in bulk, will be gladly hailed by the busy student who desires a reliable handbook of chest-signs. The plan of the book remains the same, the first part dealing with physical signs alone, and the second with their application to disease. Although brought thoroughly up to the well-established observations of the present time, the book contains no superfluous matter, and is written with singular and even severe terseness. One now and then regrets that the author has not allowed himself to dwell more at length upon certain points about which diverse opinions may be held. The mechanism of amphoric breathing in pneumothorax is one of these questions of difficulty which is dismissed somewhat too briefly. But to enlarge upon all points which admit of discussion would necessitate a much more bulky volume, and so defeat one of the author's principal objects. The student may safely take it that no view is expressed which has not been most scrupulously weighed and scrutinised. The work is thoroughly practical, and is especially well adapted for the use of those who carefully observe in the wards, and test the accuracy of their physical signs by *post mortem* inspections.

*Le Mont-Dore et ses Eaux Minerales.* Par le Docteur Em. EMOND. 12mo. Pp. 106. Paris: 1877.

The group of mineral springs in Auvergne, near Clermont-Ferrand, is not yet sufficiently known to the English. Mont Dore, La Bourboule, St. Nectaire, and Royat are all improving their establishments from year to year; and the most remote of them, Mont Dore, will soon be within an hour's drive of a railway.

Many works have been written of late years on these baths. Two of the more recent and excellent ones are those of Laugaudin on Royat, and of Boudant on Mont Dore. Dr. Emond's little book does not profess to compete with such copious works as that of Bertrand, the old-established work of reference on Mont Dore, or with Dr. Boudant's large work, but it gives a very useful *resumé* of what is to be found at Mont Dore. We can recommend it in its present form, and we believe that it is about to appear in an English translation.

J. MACPHERSON, M.D.

## CORRESPONDENCE.

### DIAGNOSIS OF SCIATIC DISLOCATION OF THE FEMUR.

SIR,—You will see by the *Clinic*, May 11th, 1878, which I send to-day, that in the *publication* of the "hitherto unrecognised test" in ischiatic dislocation, I had been anticipated, although my demonstration upon a case was in 1871, and Dr. Allis's in 1872.—Respectfully,  
W. W. DAWSON.  
*Cincinnati, Ohio, May 11th, 1878.*

The number of the *Clinic* sent by Dr. Dawson, contains a copy of a letter addressed by him to the

*Hospital Gazette and Archives of Clinical Surgery*, in which the lecture (reproduced in the LONDON MEDICAL RECORD for March) was published. We willingly aid Dr. Dawson in doing justice to Dr. Allis, by publishing the principal portion of his letter. He says.

"*Editor Hospital Gazette and Archives of Clinical Surgery.*—I find that what I described in your journal of Jan. 1, 1878, as 'a hitherto unrecognised symptom of sciatic dislocation' had been recognised and well illustrated by Oscar H. Allis, M.D., one of the surgeons to the Presbyterian Hospital, in the *Philadelphia Medical Times*, March 21, 1874. I hasten to accord to that gentleman priority in presenting the matter to the profession.

"Although I had had three cases illustrating the symptom, the first in the summer of 1871, and had demonstrated it to my classes every winter since, and had often spoken of it to my professional friends, yet Dr. Allis' paper had entirely escaped my attention.

"This is another illustration that one should not hurry into print with new discoveries; but as I had waited seven years and 'as no author, as far as I had read, had called attention to the difference in the length of the dislocated limb when extended and when flexed at a right angle with the pelvis'; I thought that I had found 'a hitherto unrecognised symptom'.

"That Dr. Allis' paper had been overlooked by others will be seen by the fact that, since my paper was published, I have received letters from a number of distinguished surgeons, who, recognising the sign as new, assured me that it would hereafter be known as my test. It must, however, be called 'Allis's Test,' for it is apparent that he first, through the press, called the attention of the profession to this most valuable factor in determining the nature of obscure as well as of simple cases, although my first patient was treated in 1871 and Dr. Allis' in 1872.—Respectfully,  
W. W. DAWSON."

## NEW INVENTIONS.

### NEW PESSARIES.

Dr. A. T. Woodward has added to the numerous list of pessaries the instruments shown in the accompanying woodcuts.

Figure 1 represents the instrument known as Smith's modification of Hodge's retroversion pessary, in which a crossbar has been extended through the centre in the short diameter, so as to divide the single fenestra into two. The object of the cross-

Fig. 1.



bar is to prevent the uterus from turning upon its short diameter or axis of suspension, whereby retroversion is accomplished. The Hodge-Smith pessary, as is well known, keeps its place well up in the pelvis, by virtue of its breadth, or the width of the fenestra. Consequently, whenever a medium-sized pessary is required, the only thing about it that offers any

obstacle to the uterus in its tendency backward is the posterior crest of the instrument, whereas the crossbar attachment, coming under or in front of the cervix, offers an opposing force, that no backward tendency of the uterus can overcome. The instrument is easily introduced when the patient is on her knees and elbows.

Figure 2 represents an anteversion pessary, made



like the retroversion pessary, of soft india-rubber, and modelled upon the Hodge-Smith pessary. A crossbar in this instance is arched over the centre of the fenestra, through its short diameter. Being made of soft and pliable material, the arched crossbar can be sprung forward, to facilitate its introduction.

#### TIEMANN'S CLINICAL THERMOMETER.

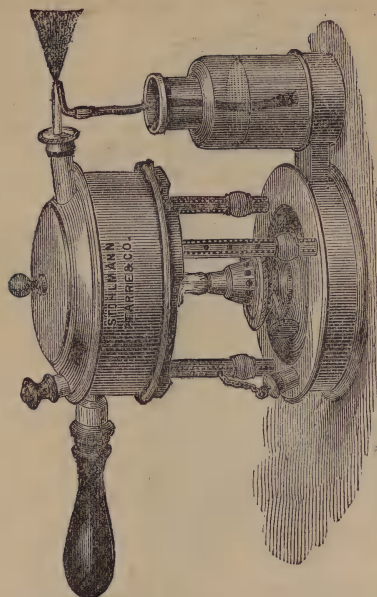
Messrs. George Tiemann and Co. of New York, have introduced to professional use a self-registering clinical thermometer, which is represented in the subjoined woodcut. They state that the instrument possesses the following merits. 1. The registering portion or index will not unite with the main column of mercury in the bulb. The "bend" fulfils the object of guarding against accidental loss of index. 2. The scale is graduated in quarter degrees, and is as long as that of a four or five-inch thermometer; the bent thermometer is less than three and a quarter inches in length. 3. The portion of the thermometer intervening between the bulb and the commencement of the scale lies in juxtaposition to the bulb, and the ascending mercury is therefore subjected to the warmth of the parts as well as the bulb, and is not exposed to external temperature. 4. It will not roll. There is no constriction in the tube, and the thermometer is therefore not liable to split when suddenly subjected to high temperature. The bent thermometer is carried in a neat morocco case (lancet case style), lined with velvet, can be conveniently placed in the watch pocket, and will not fall out when stooping.



#### WEIR'S STEAM SPRAY APPARATUS.

The subjoined woodcut represents a spray-producer, described by Dr. R. F. Weir in a paper on the Antiseptic Treatment of Wounds, read before the New York County Medical Society. It is described as being less costly than Lister's apparatus, but essentially the same, although, with the diminished cost, some of the improvements have been sacrificed. Its hollow wick, if readily raised or lowered, affords a great and controllable heat. It will supply spray for over two hours. The boiler, containing twenty-two ounces, should be, as well as the lamp, full at the beginning of the operation; and, with this precaution, it has been found practicable to dispense

with the windows of glass belonging to the original imported instrument.



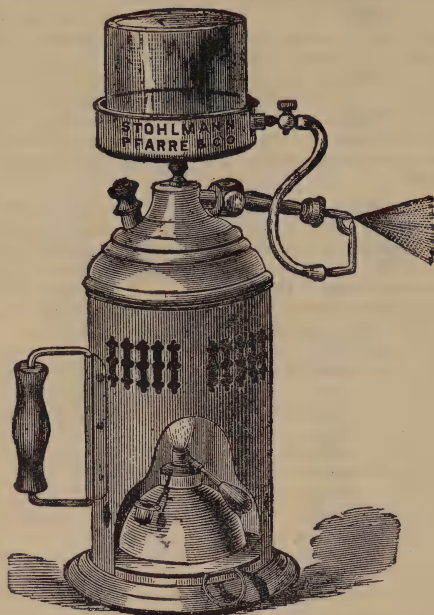
The lamp is filled with alcohol at the beginning of an operation, and the stopper removed from the side opening when the wick is lighted. Prior to filling the boiler with water (preferably hot), it is desirable to ascertain that the spray-tube is free, by sucking or blowing through it, and also that the escape-valve works properly. If the latter be stiff, a drop of oil or glycerine should be introduced from above. When the boiler is yet quite full, the spray-tube should not be depressed very much, in order to avoid the exit of hot water. If the spray be too coarse, the end of the india-rubber tubing, immersed in the carbolic acid solution, may be plugged with cotton or sponge, or the tubing itself may be narrowed by a thread loosely tied around it. Should the spray-tube become choked during an operation, it may be cleaned by means of a small wire.

#### HANKS'S NEW ATOMISER.

Dr. H. T. Hanks of New York, has described before the New York Obstetrical Society (*American Journal of Obstetrics*, April 1877) the spray-apparatus represented in the accompanying woodcut. The stand, boiler, and lamp correspond in design to the common atomiser, now generally used for inhalation, but are much larger. The open glass vessel for holding the antiseptic fluid has a capacity of one pint, and is held over the boiler in a shallow metal cup. The latter is made to move forward and backward by means of a thumb-screw attached to an erect rod, fastened at the base of the apparatus. There is a small stopcock arrangement low down at the side of the glass vessel, for regulating the amount of antiseptic fluid which flows down to the atomising points. The long metal arm, into which is fastened the glass or metal spray-producer, is attached to the boiler by a kind of elbow-joint, thus enabling the spray to be projected forward at any angle. The spirit lamp has a large tube for the wick, and over this is a second tube, which slides up and down by means of a ratchet. It readily controls the size of



the blaze, the degree of heat, and the amount of steam produced. With a proper point a coarse or fine spray may be produced, according to the amount



of antiseptic fluid admitted through the stopcock. The force of the spray will depend upon the *blaze*, and the consequent amount of steam; and the angle of the arm will regulate its direction. The apparatus thus constructed will supply a suitable spray for two hours' operation, as the antiseptic fluid can be replenished as required. Dr. Hanks says that his apparatus possesses the advantages of portability, small size, safety, durability, and cheapness.

### RECENT FRENCH BOOKS.

*Published by V. Adrien Delahaye et Cie.*

- Etude clinique et expérimentale sur les différences que peut présenter la symptomatologie de la méningo-encéphalite de la convexité du cerveau suivant le siège des lésions, par le docteur Viel.* In-8. 3 fr.
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- De l'involution utérine et de l'engorgement utérin, par le docteur Chenet.* In-8. 2 fr.
- Contribution à l'étude de la goutte, par le docteur Pouzet.* In-8. 2 fr.
- Essai sur la méningite en plaque ou scléreuse limitée à la base de l'encéphale, par le docteur Labarrière.* In-8. 2 fr. 50 c.
- De quelques troubles des fonctions génitales dans la phthisie pulmonaire de la femme, par le docteur Raulx.* 1 vol. in-8. = fr. 50 c.
- Recherches sur la trachéotomie, par le docteur Moreau.* 3 fr.
- Pratique de la chirurgie des voies urinaires, par le docteur Delefosse.* Paris 1878. 1 vol. in-12 de ix-532 pages, avec 133 fig. dans le texte. 6 fr.
- Souffrance et destinée, par le docteur Hugon.* = vol. in-8. 1 fr.
- Maladies des femmes. De la stérilité subordonnée dans certains cas aux déviations utérines et au redressement de celles-ci par la méthode utéro-vaginale ignée, par le docteur Abeille.* 1 vol. in-8. 50 c.
- Traité de Thérapeutique appliquée, basé sur les indications, suivi d'un précis de thérapeutique et de posologie infantiles, et de notions de pharmacologie usuelle sur les médicaments signalés dans le cours de l'ouvrage, par J. B. Fonssagrives.* Tome 1er, 1 fort vol. in-8.
- De la psalte traumatique, par le docteur Marcano.* 3 fr.
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- Contribution à l'étude des maladies du cœur (lésions des orifices auriculo-ventriculaires), par le docteur Camille Bancel.* 2 fr.

### PARIS GRADUATION THESES.

- Brousses (G.). De l'épilepsie et du traumatisme dans leurs rapports réciproques.
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- Masson (Albert). Etude sur la gastro-élytréostomie.
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- Debrade (Gustave). Etude sur l'hydrocèle des sacs herniaires anciens.
- Boisson (Jules). Considérations sur la constriction des mâchoires.
- Dziwonski (C.). Etude sur les injections hypodermiques de bromhydrate et de sulfonate de quinine.
- Duroux (Charles). Essai sur l'assainissement des champs de bataille.
- Castaneda (y Campos). Du phlegmon de la cavité préperitonéale de Retzius ou phlegmon périviscéral.
- Oulmont (Paul). Etude clinique sur l'athétose.
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- Choquart (Eugène). Considérations sur la pathogénie de la glucosurie.
- Bongrand (Charles). Réflexions à propos de trois cas d'agoraphobie.
- Fatome (Louis). Sur les affections péri-articulaires du genou.
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- Dehergne (Charles). Contribution à l'étude clinique des polypes et corps fibreux de l'utérus.

### RECENT GERMAN BOOKS.

*Published by August Hirschwald, Berlin.*

- Lehrbuch der speciellen Chirurgie für Aerzte und Studierende.* Von Dr. Franz Koenig. Zweite auflage. 1878. I. Band. gr. 8. Mit 87 Holzschnitten. 14 Mark.
- Handbuch der Arzneimittellehre.* Von Dr. H. Nothnagel und Dr. M. J. Rossbach. Dritte gänzlich umgearbeitete Auflage. 1878. gr. 8. 17 Mark.
- Lehrbuch der Nervenkrankheiten.* Von Dr. Alb. Eulenburg. Zweite völlig umgearbeitete Auflage. Erster theil. 1878. gr. 8. 9 Mark.
- Die Pathologie und Therapie des Wochenbetts; ein Handbuch für Studierende und Aerzte.* Von Dr. F. Winckel. Dritte vielfach veränderte Auflage. 1878. gr. 8. 11 Mark.
- Vorlesungen über Allgemeine Pathologie.* Ein Handbuch für Aerzte und Studierende. Von Prof. Dr. Julius Cohnheim. Erster band. gr. 8. 1877. 17 Mark.
- Lehrbuch der klinischen Untersuchungs-methoden, für die Brust und Unterleibs-organe, mit Einschluss der Laryngoscopie.* Von Dr. Paul Guttman. Dritte Auflage. gr. 8. 1878. 10 Mark.
- Die Natur und der Nährwerth des Peptons: eine experimentelle Untersuchung zur Physiologie des Albumins.* Von Dr. Alb. Adamkiewicz. 1877. gr. 8. 3 Mark.

### MISCELLANY.

PROFESSOR HUXLEY has been elected a Corresponding Fellow of the Royal Academy of Rome in the department of Natural History.

**DATURA STRAMONIUM AS A CURE FOR HYDROPHOBIA.**—In the *Lancet*, May 1878 (p. 739), appears a letter from a Catholic priest, M. Nicholas Miale, confirmatory of the value of stramonium in the treatment of hydrophobia—a value strongly insisted upon by Mr. Baylis of California in a previous number of the *Lancet* (p. 222). Mr. Baylis learnt the value of the drug during his travels in South China, where the native doctors kept their hydrophobic patients under the full influence of the drug for twenty-four hours, and generally with a successful issue.

**COLOUR-BLIND.**—A post-office clerk in Prussia was found to be constantly in trouble with the stamps. The accounts would come wrong. Sometimes there was not enough money in return for stamps sold, and on other occasions there was too much. This made dishonesty on his part less likely, but it was incomprehensible how he could make the accounts so entangled. At length it was discovered that he was colour-blind, and could not distinguish red from green stamps.

**CHINESE TREATMENT OF QUINSY.**—In the course of a report, which has lately been published by order of the Inspector-General of Maritime Customs in China, Dr. F. Wong gives (says *Nature*) some curious particulars respecting a strange remedial agent employed by the Chinese in cases of *Cynanche Tonsillaris*. The disease they term *Ngo-hou*, or "Goose-throat", and the remedy in question is called *Hou-tsao*, a soft stone not unlike biliary calculus in appearance. It is expensive, being worth twenty times its weight in silver, and is said to come from Siam. A dose of twenty or thirty grains of this in powder, taken in water, is thought to be very efficacious. Dr. Wong mentions having seen a case where this remedy was given, and where it certainly appeared effective, after gargles and astringents had been applied in vain. The specimens of the stone which have come under his notice appear like animal concretions, and are of various sizes, some being smaller than pigeons' eggs, while others are as large as hens' eggs. The story goes that, when a monkey is wounded, the animal, from its natural instinct, picks out the proper medicinal herbs, masticates them, and applies them to the wound, so that successive layers are in this way laid on so as to form a mass. In time the wound heals, and the lump of dried herbs falls off; it is then picked up by the Siamese, found by them to possess peculiar virtues, and sent in small quantities to China as a drug.

**LADY DOCTORS.**—The official records of the University of Paris show that since 1865 thirty-two women have been admitted as students of the Faculty of Medicine of Paris. Of these, nine have since received the university degree of Doctor of Medicine. They are: Mmes. Garrett, 1870; Putnam, 1871; Brès, 1875; Ribard, 1876; Barker, 1877; Bovill, 1877; Ocounkoff, 1877; Goutcharoff, 1877; Dahms, 1877. Twenty-three are still in course of study, of whom six are English, twelve are Russian, five are French.

**THE ODOUR OF SANCTITY.**—Dr. Hammond of New York, is fully persuaded that many of the saints of the earlier days of the church were highly odoriferous; and this peculiar quality he distinguishes from the ill-smelling savour, due to a neglect of washing, and attributes it to an affection of the nervous system. Several curious instances of fragrant saintly emanations are quoted. When the blessed Venturin of Bergamos, we are told, officiated at the altar, the people struggled to get as near as possible, in order to enjoy the perfume he exhaled. St. Francis de Paul gave off most sensibly a delicious odour after he had fasted thirty-eight or forty days, and had subjected himself to frequent disciplinary inflictions. The body of the blessed Liduine emitted a delicious redolence, which was sensible not only to smell but taste, as it left on the tongue and palate an impression like that of chewing camelia. Dr. Hammond refers to three cases which have fallen under his own notice, in which specific odours have been given off from the body, as the result of affections of the nervous system. In the first, a young married lady, of strongly hysterical tendencies, exhaled an odour of violets, which pervaded her apartment, and was distinctly perceptible at a distance of several feet from her. This pleasant fragrance was given off from the left half of the chest only, where the perspiration was remarkably increased, and could be obtained in a concentrated form by collecting the perspiration in a cambric handkerchief, heating this with four ounces of spirit, and distilling over one-fourth of the spirit. The distillate was strongly impregnated with the perfume of violets, which was converted into that of pineapple on the addition of bicarbonate of soda. It is assumed that this

perfume was dependent upon the presence of butyric ether in the perspiration. The administration of salicylate of soda ultimately relieved the lady of the violaceous redolence, which she was most anxious to part with. In the second case, a pineapple odour was exhaled with the insensible perspiration by a young lady suffering from chorea. In the third case, a violaceous odour was emitted by a hypochondriacal gentleman. Dr. Hammond has known unpleasant odours to be exhaled from the body during emotional excitement. A young lady, suffering from sick headache, smelt of Lemburg cheese. At present, all that we can say is that the peculiar odours referred to are the result of nervous disturbance.

**CONSUMPTION OF NARCOTICS AND STIMULANTS.**—Some curious statistics as to the consumption of narcotics and stimulants throughout the world are given in a late report of Mr. Jez Killebrew, the Commissioner of Agriculture in Tennessee. Paraguay tea, it is computed, is used by 10,000,000 human beings, coca by 10,000,000, chicory by 40,000,000, cocoa by 50,000,000, and coffee by 100,000,000. The consumers of betel are set down at 100,000,000, those of hashish at 300,000,000, and those of opium in one or another form at 400,000,000. These figures are, however, eclipsed by the proportions of the demand for Chinese tea, which is said to be used by 500,000,000, while the consumers of tobacco are not only still more widely distributed, but present the astonishing aggregate of 800,000,000. According to a careful estimate prepared for this report, tobacco is more generally used than any other single article of commerce consumed by man. The United States in 1860 produced more than 430,000,000 lbs. of tobacco, but, ten years afterwards, the yield of the plantations had dwindled to about 260,000,000. The report does not state the exact quantity grown in any subsequent year; but it seems that the exports alone in 1875 reached about 220,000,000 lbs., valued at more than 25,000,000 dols. According to the United States Bureau of Statistics, leaf tobacco valued at nearly 29,000,000 dols. was sent out of the country in the year ending June 30, 1877. These figures would make tobacco rank sixth in the list of exported staples from the United States, cotton, breadstuffs, petroleum, and the precious metals alone exceeding it in importance. In 1875 the best customer of the United States for tobacco was Germany, who, notwithstanding the large quantity grown in Prussia, took 56,000,000 lbs., while Great Britain, which produces none, took only 54,000,000 lbs.

**THE LAW OF INSANITY.**—In Dr. Bucknill's second Lumleian lecture on this subject, delivered at the Royal College of Physicians, the lecturer dwelt upon the fact that, for legal purposes, the insane state of mind, with reference to conduct, was the sole question at issue, the diseased bodily condition being only corroborative evidence. Even medical classifications were framed upon the mental state as their basis; mania, monomania, melancholia, and dementia being redolent of insanity, from the lawyer's point of view, and not from the physician's; and the more recent medical terminology of homicidal, suicidal, impulsive and moral insanity, marked the fact still more strongly. With regard to homicidal insanity, he showed that the first examples were taken from Gall, who, however, distinctly stated that they were not instances of real insanity, but of some vice in the organism which ought to be dealt with by punishment. Esquirol, Georget, and Marc had developed the theory of homicidal insanity without lesion of the intelligence. Their metaphysical theory was that it is a disease of the will. Recent English authors have fully adopted this theory, although they have changed the terms in which they express it into impulsive insanity to kill, homicidal impulse, and uncontrollable impulse. The judges, in scouting the theory of uncontrollable impulse, have mainly censured the use of the predicate "uncontrollable", whereas the lecturer contended that the misleading word "impulse" ought to be most condemned in its application to offences done with motive, as he maintained that all action which was neither unconscious nor automatic must be. He concluded his argument against homicidal insanity *sans delire*,



or impulsive insanity to kill, by asserting that neither in his own experience nor in that of his friends, Dr. Crichton Browne, late of the West Riding Asylum, and Dr. Orange of the Criminal Asylum at Broadmoor, had a single instance of such insanity ever been met with, nor an instance of real insanity, where the homicide was the earliest symptom of mental disease. He said that while homicidal insanity had been invented, the moral insanity of Pritchard had been only misrepresented, for that underneath such misapprehension lay the fact of what he called evolutionary insanity, in which there was a lifelong history of vice and crime, which would eventually develop into real insanity. This form was, perhaps, more important to schoolmasters and trainers of youth than to lawyers, though sometimes it led to cruel crimes, as in the instance of William Dove, who was executed for deliberately poisoning his wife with doses of strychnine. In his clear and logical charge at this trial, Baron Bramwell put it to the jury as the two points which the law referred to them—Did he know he was doing wrong? Could he help it? The lecturer concluded by the consideration of groups of insane offenders, studied with reference to their bodily disease, their mental state, and their offence. There were, he said, the idiotic, the evolutionary, the epileptic, the puerperal, the paresic, and other groups, the careful study of which, in reference to responsibility, would greatly strengthen the position of the scientific witness, and aid in the administration of justice. In his third and concluding lecture he discussed the question of motive. He said there was always some motive for insane action, except when it was unconscious or automatic, and that the motives of lunatics very frequently showed malice of some kind or other, but that they were unreasonable and incommensurate with their conduct. But an evil motive was not necessarily a sane motive. He insisted upon the necessity in lunacy trials of taking into consideration the state of the whole mind, as affected by disease—that is to say, of the disposition, the intellectual conception of the object, the desire to obtain it, or that form of wishing which is called will, and which combine to produce those muscular movements by which the act is consummated. This consideration of the mind, as a whole, was aided by the study of different states of mind, which the lecturer considered under the heads of states of unconsciousness, of ignorance, of delusion, and of passion. States of unconsciousness were due either to somnolence or to epilepsy. Some recent trials had caused epileptic unconsciousness to be much discussed. A homicide might, no doubt, be committed in such a state. Another mental state arising from disease, and leading to criminal acts, was that of ignorance, of which there were infinite degrees and two distinct kinds—the simple ignorance of the idiot, who might not know the very nature of the act, and the incomprehension of the demented or incoherent lunatic, who has lost that quality of reason which looks before and after, and cannot appreciate the wrongfulness or the consequences of his conduct. Delusion in certain cases was conclusive proof of irresponsibility, but the difficulty was to prove its existence, for no mental state was so easily simulated. A common mode of argument was that the man is insane because he has delusions, and his opinions are delusions because he is insane. Standing by itself, the expression of the most absurd opinion was an untrustworthy test, but, combined with other symptoms of insanity, a most efficient one. Its influence over the loss of self-control ought to be estimated, like that of other mental states, by the circumstances in each individual case. The state of passion or desire could not in itself constitute insanity, although its excess or defect, caused by disease, was an element in insane conduct which could not be disregarded. It was, however, only in connection with morbid intellectual states that passion became part of insanity, forming that state of the whole mind which was significantly called mental derangement.

**MENSTRUATION AND MEAT-CURING.**—Several members have published in the *British Medical Journal* for March and April 1878, a number of interesting observations upon this subject. It has been proved that women attending to meat-curing during their menstrual epoch spoil

the hams, etc., and that this result is well known to many cooks, so that they decline to undertake this duty during that epoch. R. B., p. 514, asserts that moisture on the hands is believed to be the cause. "Surgeon", p. 590, asks, "If such bad results accrue from a woman curing dead meat whilst she is menstruating, what would result, under similar conditions, from her attempt to cure living flesh, in her midwifery or surgical practice?" Mr. Story (p. 663) confirms the bad effect of menstruation upon meat-curing, and states that gonorrhoea and syphilis in men are equally injurious to the process.

A NEW remedy for diarrhoea in men and animals is said to have been discovered in New Zealand, where it has long been in use among the Maories. It consists, says *Nature*, in a decoction, made by pouring boiling water on the green leaves of a shrub called koromiko by the natives. The liquid, though slightly bitter, is said to be not unpleasant to the taste. It is asserted that two doses of this decoction will always effect a cure, even in bad cases.

**THE MICROPHONE IN SURGERY.**—On June 4, Sir Henry Thompson gave a demonstration, in the anatomical theatre, University College, on the microphone as applicable in operations for stone. He said that it was clearly important to be able to deal with the smallest calculus in the bladder: at the same time, in his belief the present methods of lithotomy were quite sufficient in the hands of any surgeon of fair practice in the operation. He compared the use of the new instrument which he was going to describe to that of the endoscope, which, however satisfactory on paper, had not been found important in practice, or, better perhaps, to that of the higher powers of the microscope, which were not necessary, nor, perhaps, even advantageous in ordinary work, but which were a valuable resource in questions of unusual difficulty. The apparatus consisted of the ordinary feeble battery with wires, connected with two telephones running to different parts of the room, and applied to the ears of the listeners. The ordinary sound used in operations for crushing the stone was attached by a wire to the circuit of the battery. Near the handle a piece of carbon, such as is used by Professor Hughes, was carefully balanced and attached by a delicate spring to the battery circuit. When the end of the sound struck against the smallest piece of calculus, the acoustic wave was transmitted along the steel of the instrument to the carbon, where it was transformed into electric vibrations, which were multiplied through the telephone, so that the noise became loud and unmistakeable. But in practice many things might interfere with the advantageous use of the instrument. The carbon arrangement on the sound must not be too delicate, else the mere friction of the instrument on the walls of the bladder would produce a noise quite capable of being confounded with that caused by the presence of calculus. The battery must not be too strong, else mere accidental friction of the wires or the noises of the room would produce a distinct sound. But when care was taken there would be no difficulty in detecting the noise. An ordinary calculus was put in a bladder in a basin of water, and the listener could distinctly hear the different noises produced by the point of the sound rasping against the walls of the bladder, or striking the stone. A sharp stroke of the former was sometimes not quite unlike the latter. But with the microphone properly adjusted, and the battery not too strong, it was easy by trial to detect the presence of even a minute fragment of unremoved calculus in the bladder. The carbon needed only to be fitted to the probe, of course, to detect bullets or fragments of bone.

**DISINFECTION OF ENTERIC EXCRETA.**—The quantity of permanganate of potash required for the above purpose was experimentally determined by Dr. Dougall (*British Medical Journal*, March 16). He arrives at the conclusions that the cost of Condly's fluid necessary to effectively disinfect the excreta of a typhoid patient per week would be about £7. Supposing a hospital with thirty enteric patients constantly under treatment, it would require £10,920 worth of Condly's fluid to disinfect their yearly excretions.

# The London Medical Record.

## ON LEAD-PALSY, AND SUBACUTE ATROPHIC SPINAL PARALYSIS OF ADULTS.

By DR. M. BERNHARDT, of Berlin.\*

GENTLEMEN—The patient now before you, A. T., 49 years of age, was always healthy till the summer of 1868. A certain amount of feebleness in the right hand had been not specially noticed, and was attributed to her work (sewing very thick material). In July 1868 her left arm began to tremble; holding a cup or spoon became troublesome. The whole upper extremity became heavy, but could still be quite actively moved. At the beginning of August, the patient, who up to that time had shown no sign of general ill-health, went to bed (washing was hanging in the room, and a window was left open), and woke next morning with complete paralysis of the left arm. After a few days, a very noticeable enfeeblement attacked the right arm also, but which at the end of a month much improved under electrical treatment, and the paralysis of the left arm receded. It soon appeared, however, that this was only *the case for a single group of muscles*, the rest remaining paralysed and rapidly wasting. This was the condition during 1869 and 1870, during which time the electrical treatment was continued, and she remains so till the present time (October—November 1877), without any exacerbation of symptoms, or any other muscles having become paralysed or wasted. The lower extremities were never involved; urination and defæcation have been always normal; no affections of the psychical functions or cerebral nerves have occurred. At the present time the patient is a ruddy healthy-looking woman, and, excepting the paralysis of her arm, considers herself well. The smallness and flatness of the left shoulder as compared with the right are very striking; the acromion projects forwards, and between it and the head of the humerus there is a furrow in which the index finger can be laid. The entire left upper arm is thinner than the right, especially on the flexor aspect; the forearm is over-extended on the humerus, and cannot be flexed by any effort of the patient. If you tell her to bend her left arm, she swings the whole limb upwards over her shoulder, and then the forearm falls of its own weight on the humerus. The arm bent by this means can be actively extended. If we partially bend the forearm upon the upper arm, and then ask the patient to continue the movement, by a great exertion she is able to do so, but this is effected by the flexor carpi ulnaris and flexor digitorum profundus, which can be seen and felt to contract. Supination of the left forearm is not possible; if the arm be passively supinated, pronation is readily effected. The movements of the left hand and fingers are in every respect free. The hand is a little curved, and the skin bluish red, but no œdema or eruption is present. There is no atrophy of the interosseous or thenar muscles. The arm can be raised from the

shoulder in spite of the visible atrophy, and the clavicular fibres of the deltoid can be seen to contract; adduction, internal and external rotation, and drawing back, of the arm are all well performed, although the last is not quite so perfect as on the right side. The right arm is quite normal, except a distinct atrophy of the ulnar side of the extensor aspect of the forearm, which is associated with inability to completely extend the fingers; the basal phalanges of the thumb and index finger being alone perfectly extended, the remainder persisting in a state of half flexion, in spite of the strongest voluntary efforts; the middle and ungual phalanges of the same fingers being, however, as perfectly flexed and extended as in health. She feels a certain subjective sense of weight in the left arm, but no more definite affection of sensation is present. Electrical examination gives the following. In the right arm, the muscles all react well to direct and indirect stimulation, except the extensor communis digitorum, which does not extend the three fingers above mentioned; the extensor carpi radialis reacts more feebly than normal, although its contour is prominent. In the left arm, the deltoid reacts only near its origin from the clavicle; the biceps and both supinators are absolutely without reaction; it is questionable whether or not some intact fibres of the long supinator exist in the upper arm, where it is covered with fat. All the other muscles of the arm, forearm, and hand react to both direct and indirect stimulation. Placing an electrode on the point mentioned by Erb as that from which it is possible to stimulate both the biceps and long supinator together (at the exit of the fifth and sixth cervical nerves between the scalenæ) gives a marked reaction of the muscles in question on the right side, but remains without effect even with much stronger currents on the left. With the anode of the constant current on the neck, and the cathode on the right deltoid, a feeble contraction occurs with 22 cells, while on the left side 30 cells produce only a quick twitching of the clavicular fibres, the bulk of the muscle remaining un-excited; with 33 cells the remainder of the left deltoid reacts. The left biceps does not contract, the right contracts with 13 cells. By stimulating the right radial nerve with 20 cells, there is short quick movement in the index finger and thumb. The muscular fibres of the extensor communis, from the three outer fingers of the right hand, do not react to direct or indirect stimulation. All the muscles of the left arm, innervated by the radial nerve, contract with 20 cells, except the supinators. We have, in the case before us, paralysis and atrophy of the deltoid, the biceps and brachialis anticus, as well as of both supinators on the *left* side, and a part of the fibres of the extensor communis digitorum of the *right* side.

Before commenting on this case, I will briefly relate the other.

J. W., aged 29, a painter, has been 16 years at his work, and during the first ten years had occasionally violent colicky pains in the abdomen, but no special illness. Four years ago he had an attack of colic which lasted longer, and left a sense of weight in his arms, but from which he completely recovered. A new attack of colic in August 1877 threw him on his back; after a few days the pains ceased, and he felt better; but one night, without any affection of the sensorium, paralysis of both hands and fingers supervened, which I will describe more exactly. *The shoulders and the upper arms remained freely movable.* The patient was a moderately well built,

\* *Berliner Klinische Wochenschrift*, June 1878.



rather thin, at the present time pale and cachectic-looking man, with a marked pigeon-breast. His gums were livid, and showed a decided trace of blue line. His mental condition was normal, he walked without difficulty, showed nothing special in the sense-organs or in the cerebral nerves; his general condition was satisfactory; defæcation and urination was normal. The condition of the hands and fingers of the patient, which in consequence of lead-poisoning presented a paralysis of the extensors of the hands and fingers (*i.e.*, of their basal phalanges) has been so often described, that I will not dwell further upon it. Extension of the forearm on both sides was free; equally, flexion of the forearm on the upper arm, with swelling of the contour of the biceps was well effected, and both arms could freely execute all the movements of the shoulder-joint. The first interosseous space was not only sunken, as is often seen, but there was decided atrophy of the ball of the thumb, and on both sides the interosseous spaces were sunken, and the interosseous muscles were atrophied, and incapable of function, so that the lateral movements of the fingers and the extension of the middle and ungual phalanges were not possible. The hypothenar eminences were also diminished in both hands. There was also paralysis of the muscles supplied by the radial nerves on both sides, and of some of those supplied by the median and ulnar nerves. But these undoubtedly interesting phenomena pass into the background when we consider the results of electrical exploration. With the induced current of the muscles supplied by the radial nerve, on the left (the less affected) side only the extensor carpi ulnaris and supinator longus react but very feebly; all the other muscles remain unaffected, and these by direct and indirect stimulation. On the other hand, the muscles supplied by the ulnar and median nerves on the left side contract very forcibly to both direct and indirect stimulation, but the adduction of the interosseous and thenar muscles was very feeble, or almost *nil*. The same, only more marked in failure of reaction to the induced current, is the case on the right side; even with the strongest currents the supinator longus, a muscle which usually remains intact in lead-poisoning, scarcely displays its contour, and in the feeblest outline the tendons of the extensor carpi radialis longus et brevis display themselves, but without producing any corresponding movements. It cannot be said that these results are very surprising, except as regards the diminished excitability of the supination; but it is remarkable that muscles, which have their functions quite unimpaired, and are used at will by the patient, and of the action of which he has never complained, should react either not at all, or only in the smallest degree, to the strongest induced currents. This is the case for both the deltoids (except the clavicular portion), for the biceps and brachialis internus. With the constant current, the deltoid, biceps, supinator longus, and the extensors of the hands and fingers on both sides, with strong currents (30 to 40 elements) give only fibrillar twitchings; in fact we have in the paralysed, as well as in the unparalysed muscles, the most marked degenerative reaction (*Entartungs-reaction*).

If we fix our attention on the case of the woman A. T., we must ask ourselves what is the condition with which we have to do. Both upper extremities seem to have been simultaneously affected by muscular enfeeblement, which improved and left only particular muscles affected. These atrophied with loss of their electrical excitability; and we are led to

regard it as analogous to "infantile paralysis", an acute or subacute atrophic spinal paralysis of adults. It is all the more probable, as both extremities were affected, and the paralysis and atrophy have attacked different groups of muscles in the two arms, as it does not accord with our experience to find peripheral paralysis affecting simultaneously one and the other arm, and in distinct nerve areas. On the other hand, we know, and I have myself reported a case, that acute atrophic spinal paralysis, like that of children, can affect individual groups of muscles and lead to their atrophy. Until we have some *post mortem* evidence, we cannot disprove or altogether quite invalidate the objection that we may have to do with a peripheral paralysis in such cases. Unless I am deceived in my acquaintance with literature, I was the first to give expression to this idea. In spite of the want of precision in the data and the uncertainty of the facts, it is permissible, in face of the strikingly similar affection of the cord in children, to expect an analogous change in the cord of adults, and to accept the anterior horns as the seat of the lesion. But I leave this question for further evidence from future careful microscopical examinations of early acute cases in adults. It is of quite special interest in this case that on the left side the muscles were paralysed and atrophied, which seem to be supplied by nerves from the fifth and sixth cervical roots. Were we in this case to suppose a lesion (whatever its nature may be) of the cervical cord and in that of its grey matter, then we must suppose it to affect a quite limited group which send their axis-cylinder processes into the anterior roots. These then should be the cells from which the nerves for the deltoid, brachialis internus, biceps, and supinators arise. If we turn now to the observations on our second case of chronic lead-palsy, we have before us the striking paralysis and atrophy of the hand and finger extensors, of the interossei, and of the thenar and hypothenar eminences. Unusual here is the implication of the median area (thenar muscles), unusual, also, the paralysis and atrophy of the interossei, so seldom, indeed, that Remak refers in his work on the "Pathogenesis of Lead Palsy", to a case published by him as unique, in which the supinators participated unmarkedly in the paralysis. In Remak's case there was also paralysis of the deltoid, biceps, and brachialis internus, which latter, by superficial examination of our case, could not be seen; the arm could be moved at the shoulder in all directions, and flexion at the elbow-joint was also quite free. But since we have learnt from Erb that a muscle which is not paralysed, and never has been paralysed, may by electrical examination be recognised as diseased, I have held it my duty in every case to undertake this examination, and in this case it gave the most decided evidence of disease in active freely movable muscles, in that they did not react, or did so in the least degree, to very strong induced currents, and with the constant current gave the most decided degenerative reaction (*Entartungs-reaction*). Diseased were also in this case, not only the supinator, but the deltoid, the brachialis int., the biceps, in a word, all those muscles which functionally are connected, which by disease can indicate functional incapacity in quite definite nerve-roots, which, as we in the observations on the first case saw, can become diseased and paralysed without lead-poisoning or any other cause (cold, etc.), than the before-mentioned changes in a quite limited section of the spinal cord. Similar observations were those which led Remak, Erb, and myself to accept as the

pathologico-anatomical basis of so-called lead-palsy a disease of the grey matter of the cord, and I believe that both cases just related, and placed side by side, present a new support to this view, if not amounting to proof, at least importantly strengthening it. But the interest of the last case is not exhausted. It was only by careful electrical examination that the diseased state of the muscles was discovered, right as well as left were freely movable. It was Erb who first pointed this out, and advanced the hypothesis that different trophic centres in the cord exist for nerve and muscle, which in given cases may be singly affected by disease. In our case (lead-palsy) on the right side, if we take for instance the right deltoid and biceps, there were no paralysis, inexcitability (or at least much diminished excitability) by indirect (above the clavicle) irritation, as well as by direct stimulation with the induced current, very much diminished excitability by indirect stimulation with the constant current, marked degenerative reaction by direct stimulation with the constant current. On the left, most of the nerves and muscles were normal, both for voluntary motion and direct and indirect stimulation with both currents, and only single muscular fibres showed by direct stimulation the degenerative reaction, a condition which Erb had observed in some cases of progressive muscular atrophy. If we regard the facts thus disclosed in my cases, we see no proof of the truth of this hypothesis of separate centres in the spinal trophic apparatus for muscles and nerves. In an essay which I published at the end of my first paper on the later christened "middle form" of paralysis, I maintained that it is conceivable that the pathological irritant affects the muscle itself, perhaps with the inseparable nerve-ending; but it leaves this latter either unchanged, or only so affected that, as may be found in the later stages of recovery from very marked paralysis which has produced pathological changes in the muscle itself, and which leads to increased excitability and abnormal reaction to the galvanic current, without even destroying this, the irritation of the induced current or of volition is absolutely not obeyed.

There is still another hypothesis which Wernicke has recently proposed respecting these interesting phenomena. In a case of facial paralysis in which the nuclei of the medulla oblongata were destroyed by a tumour, a number of the nerve-fibres were quite intact. He says, "It appears that, if a certain number of the nerve-fibres are preserved, the faradic and galvanic excitability, especially for the minimum of contraction, may not be notably diminished, but only the total contraction with stronger currents must be much less, as only the primitive muscular bundles supplied by the preserved nerve-fibres are excited. The excitability of the muscle by direct irritation with the faradic current must be more diminished, as in this case the electrode encounters the preserved nerve-fibres singly. While the greater part of the muscular bundles which are connected with degenerated nerve-fibres suffer under the recognised changes of excitability, namely the increase of direct galvanic excitability, and modification of the force and manner of contraction; by their overwhelming number the degenerated fibres must manifest the changed muscular reaction, yet a smaller number of the same may not be observable because the scattered diseased fibres can make no movement. The so-called middle form of rheumatic facial paralysis is distinguished from the severe form by the exemption of certain groups of fibres, while in the latter (the severe form)

the whole mass is affected; the numerical relations of the healthy to the diseased fibre is given approximately by the electrical examination. This explanation permits us to say that some diseases of nerve-nuclei, in which single cells and fibres are affected together, will present this middle form of change of muscular excitability; and Erb has related two such cases, one of progressive muscular atrophy, the other of lead-palsy, in which in the later stages an affection of the nuclei appeared probable." Whether now this hypothesis of Wernicke is the true explanation of these phenomena (it allows us, as we see, to dispense with special trophic centres for nerve and muscle) or Erb's, or whether for particular cases, as I have sought to make it probable, a direct affection of the muscle can give rise to such phenomena, I leave undetermined. The definite solution of these highly interesting questions requires accumulated observations on living patients, with deductions carefully made, regard being had to all the possibilities, and, where possible, by experiments on animals.

ROBERT SAUNDBY, M.D.

## CONCUSSION OF THE SPINAL CORD : SYMPTOMS OF LOCALISATION.

By M. DUPLAY.\*

I AM going to address you to-day on a case which presents certain very interesting paralytic symptoms following an injury to the lumbar region. It is that of a carpenter, aged 47, lying in No. 43 of St. Augustine's ward. This strong and active man, who had always enjoyed excellent health, seven weeks ago fell from a height of about six feet, in such a manner that the pelvis sustained the entire violence of the shock. Still he was able to get up, walk, and even to go on with his work, and, excepting somewhat acute pain in the contused part, he did not feel much inconvenience at the time. That day he felt no inclination to pass urine, but the following day, twenty-four hours after the fall, he wished to do so, but found himself unable, even with the greatest and frequently repeated efforts. He then consulted a doctor, who used a catheter, and for the next three weeks his bladder had to be relieved by the same means, until after the expiration of that time urination became again possible, although requiring a great effort. The calls to micturate were very frequent, and the quantity passed was very small, the stream slender and feebly propelled. There were pains in the urethra and in the hypogastrium. For the last three weeks the urine has been turbid and slightly ammoniacal. Concomitantly with these disturbances there exists obstinate constipation, requiring enemata or purgatives for its relief. Finally, for the last six weeks there has been complete abolition of sexual power, which succeeded to a short period of excitement of the same function during the week immediately following his accident. Examination of the parts shows that there is no obstruction to the passage of the catheter into the bladder, and nothing can be felt by digital exploration of the rectum, except that its mucous membrane feels relaxed and thrown into folds, as if by want of tone in the muscular wall of the bowel. There is, therefore, atony or paresis of the walls of the bladder and rectum, a functional disturbance which we can only regard as due to concussion of the lumbar part of the spinal cord produced by the injury which the

\* *Progrès Médical*, June 15th, 1878.



patient suffered. At the outset, we must discard all idea of a grave lesion of the cord; the bony structures present no trace of injury; the symptoms are limited to vesical trouble, constipation, and sexual impotence; the lower limbs are absolutely free from any paralysis. If there then exist a lesion of the cord, it must be very slight. It is probable that we have to do with concussion alone, analogous to that observed in the brain after an injury to the cranium, which is well known clinically, but of which much less is known concerning its pathological anatomy.

At the same time, we may distinguish two kinds of spinal concussion. 1. Under the influence of violent shocks, such as a fall from a height, or a railway collision, we see paralytic symptoms produced immediately after the injury, such symptoms varying according to the seat of the concussion. Generally, as well as the bladder and rectum, the lower extremities are paralysed. The further progress of such cases varies; sometimes the symptoms disappear after some time, and then the case has been one of true concussion; there has been, that is to say, only a shaking, and no more or less marked structural lesion. Sometimes, on the other hand, the symptoms, instead of improving, persist, or even get worse; and as these symptoms followed immediately upon the injury, we must attribute them also to spinal concussion, which in this instance, however, has been more violent, and has gone on to rupture and hæmorrhage into the substance of the cord. Finally, symptoms of chronic myelitis may result. In this case the word "concussion" is ill chosen; we ought rather to speak of "contusion". In other cases, again, the symptoms persist without improvement or aggravation; we have in such cases to do with a localised lesion, which, undoubtedly, has determined atrophy of the nervous elements. 2. In another form of spinal concussion the symptoms do not appear until some time after the accident (railway collision). Some days, some weeks, or even some months may elapse without the patient experiencing any functional disturbance; then the symptoms of myelitis supervene. In those cases in which there is often question of damages from the railway companies, the physician may find himself beset with serious difficulties. Sometimes the patient is accused of feigning illness, sometimes the spinal symptoms are not developed till long after the accident which is said to be their cause, their dependence upon it is denied and the circumstance is considered as merely a coincidence. These legal questions have been frequently debated in England.

In our patient, the symptoms have followed immediately upon the injury; we may admit that we have to do with the first form of spinal concussion; but in him the symptoms present some peculiarities. In ordinary cases there is, in addition to the rectal and vesical trouble, paralysis of the lower limbs. An entire segment of the cord is affected, and the symptoms are analogous to those of complete section or of transverse myelitis. But in the patient in St. Augustine's ward there is no trace of paralysis of the limbs. The paralytic phenomena have solely affected the genito-urinary organs and the rectum, in such a way that the concussion seems to have been limited to some localised spots in the spinal axis.

Can physiology give us any explanation of this peculiarity? It is well known that there are certain centres in the cord presiding over the functions of the bladder, the rectum, and the genital organs, and in this case the lesion appears to have been limited to these parts, and to have confirmed by a patho-

logical experiment that which physiology had taught us. The vesical nerves come from two sources; the sympathetic and sacral plexus, and these two kinds of nerves are both distributed to the body and the neck of the bladder. An Italian physiologist, Giannuzzi, has demonstrated that there exist for the functions of the bladder two motor centres: the first, in connection with the sympathetic fibres, is situated at the level of the third lumbar vertebra; the second, in connection with the nerves of the sacral plexus, at the level of the fifth lumbar vertebra. Excitation of the first causes slow and feeble contraction of the bladder, while excitation of the second causes, on the contrary, sharp and energetic contraction. Moreover Masius (of Liège) has discovered that there is a centre for a rectum which he calls ano-spinal, and which, in the rabbit, is situated at the level of the sixth lumbar vertebra. Finally, long ago, Budge demonstrated the existence of a centre for the sexual function at the level of the fourth lumbar vertebra. Applying these facts to clinical study, we can admit that lesions limited to the lumbar region of the cord may affect solely the centres which govern the functions of the bladder, the rectum, and the sexual organs. In our patient, we are authorised to declare that the concussion was limited to these centres. Examples of similar localisations, after injury, are rare. In our wards we have another patient in whom we may admit equally a very localised spinal lesion, but due to a different cause. This patient, lying in No. 13, is eighteen years of age. He has a deformed foot on the right side, with atrophy of the corresponding limb. He urinates involuntarily, both by night and by day, and we have been able to assure ourselves that there exists in his case vesical paresis, and that he urinates by simple overflow. The stream is small, twisted, propelled feebly, and if, after micturition, a catheter be introduced, a considerable further quantity of urine may be drawn off. In this young man's case, therefore, there is paralysis of the bladder, but none of the rectum nor of the sexual function. This paralysis ought to be ascribed to a spinal lesion dating from childhood, and localised in the small vesical centre of Giannuzzi. The motor and trophic affections of the lower limb are evidently due to a lesion of the anterior cornua of the cord.

Let us now return to our first patient, in whom we have diagnosed concussion of the cord. What will be the prognosis? Since the accident, there has been some improvement, as he can now pass his urine, although with difficulty, and without completely emptying his bladder; but as this improvement has made no advance for three weeks, it is to be feared that the spinal lesions are not undergoing repair, and that the functional disturbance will persist indefinitely. Moreover, you must not forget what I have told you, that the symptoms of spinal concussion, far from improving or remaining stationary, may constantly get worse; therefore it is prudent under such circumstances to reserve our prognosis.

From a therapeutic point of view we have two indications, one from the symptoms, the other from their cause. The bladder empties itself badly, the urine becomes altered, and during its stay in the bladder causes hypogastric pain: we must therefore use the catheter twice daily, and inject the bladder with tar-water (*eau de goudron*). For the rectal trouble the patient must take a laxative, or he may have enemata. But the true indication is to act upon the cord, the lesions of which are the cause of the functional disturbances; unfortunately this indi-

cation is not easy to fulfil, for if we can localise the lesions we do not know in what they consist. As there are no symptoms of inflammation there is no need to employ antiphlogistics, but rather to use revulsive means. A large blister has been already applied, and will be increased in a few days. At the same time I have practised subcutaneous injections of ergotine, in the hope of awakening muscular contraction of the bladder. With the same end in view I shall have recourse, if these means fail, to strychnia and hydrotherapy. Finally there is a last means, electricity by the constant current. Legros and Onimus contend that the direction of the current is not indifferent. They say the descending current is "hyposthenisant"; whilst the ascending current has the opposite effect; it is, therefore, to this latter means that we shall resort if all the others remain without effect.

ROBERT SAUNDBY, M.D.

#### MICKLE ON VARIETIES OF GENERAL PARALYSIS OF THE INSANE.\*

MANY students of mental disease have been impressed by the very various order and intensity of the mental and physical symptoms and signs, modes of origin, intercurrent affections, duration, variability, and pathological anatomy in cases of general paralysis of the insane, and some have been led to believe that there are varieties of this disease. With the object of giving some solution to this question, Dr. Mickle has through several years carefully observed a number of cases, and noted the pathological appearances they presented after death. He believes that he has by his investigations been able to isolate five distinct groups, each differing in its symptomatology from every other, and each having distinctive pathological conditions peculiar to it. He thinks it desirable to record these cases, grouping them according to certain differences in the pathological lesions of the encephalon, and to indicate the clinical features which in their totality constitute, as it were, the garb of each group. The groups are not offered as representing proved varieties of general paralysis, but as an attempt to connect certain pathological conditions with leading symptoms. It is not meant that the pathological process is distinct, but that it has attacked with greater intensity certain encephalic localities, or that it has been of a milder type and run a slower course, and has thus given rise to corresponding difficulties in the clinical history of the cases. In common with Dr. Crichton Browne and A. Foville (*fil.*), Dr. Mickle has not failed to observe and appreciate the value of adhesions of the membrane to the surface of the brain in the localisation of the disease processes, and their significance in relation to the localisation of function in the brain.

Dr. Mickle shortly recapitulates the principal points relating to the several groups as follows.

##### GROUP I. The principal changes are these.

1. There are hyperæmia and softening, more than usually generalised, but affecting the cortical substance of the superior lateral, and, to a less extent, internal fronto-parietal regions.

2. The cerebellum is usually affected in a considerable degree; so are the basal ganglia, while the mesocephale and spinal cord also are apt to suffer, but in a less degree.

3. Adhesion and decortication are usually well marked, mostly confined in the cerebrum to the upper and lateral surfaces, particularly well seen over the frontal lobes, well seen on the parietal, less over the temporo-sphenoidal, sometimes slightly or moderately over the internal and inferior surfaces. The cerebellum is often affected with adhesion and decortication.

4. The above changes are nearly or quite symmetrically disposed in the two hemispheres.

The principal clinical features of this group are as follows.

1. Variability of mental symptoms, both intellectual, emotional, and moral is observed.

2. Exalted or extravagant delusions are the most marked feature, while maniacal excitement and insomnia are frequent.

3. The patients manifest gaiety, self-satisfaction, benevolence, or pride; or they are selfish, haughty, hostile, obstinate, abusive; or destructive, untidy, and often of filthy habits.

4. Transitory depression or melancholia sometimes comes on.

5. Dementia is occasionally the predominant mental character from the first.

6. Motor paresis and ataxy are sometimes well marked, but are often masked by the maniacal state, or but imperfectly developed in the earlier period. Motor restlessness is frequent.

7. Occasionally there are epileptiform seizures, choreiform movements, or tremor coactus.

8. Now and then there are hallucinations of hearing or of sight; later, defects of general or special sensation, or hypochondriacal sensations.

##### GROUP II. The principal changes are these.

1. There is atrophy of the brain; considerable increase of intracranial serum; the ventricles are dilated and much granulated. The gyri of the brain are wasted, especially on the upper surface and at the frontal region; the corresponding grey cortex being either softened or occasionally of about normal consistence, pale, watery, sodden, or at times of fair colour, or even mottled by irregular hyperæmia.

2. The white cerebral substance is softened in some cases, more or less indurated in others; it usually tends to pallor.

3. Adhesion and decortication, usually slight or moderate here as compared with the other groups, are met with principally at (*a*) the Sylvian fissures; (*b*) the upper frontal, and (*c*) the parietal surfaces; (*d*) the base (orbital and temporo-sphenoidal).

4. The basal ganglia are generally pale, soft, shrunken. The pons Varolii and medulla oblongata are pale and soft; the spinal cord is softened or indurated.

5. Meningeal changes are very marked and extending to the base, and like the other changes, symmetrical.

##### The principal clinical features are these.

1. The mental symptoms in the earlier periods may be exaggerated notions, or paroxysmal excitement with strange demeanour, or, though rarely, exclusive dementia predominating from the first; finally, a protracted stage of dementia in which fitful outbursts of excitement or hypochondria may occur.

2. The quiet self-satisfaction or the negative emotional state of the early periods is usually replaced by morose, peevish, distressed, or apprehensive states of feeling, and these by obliteration of the emotional

\* *Journal of Mental Science*, April 1878.



life. The habits are foul, often destructive, obstinate, abusive, brutish.

3. Motor paresis is comparatively slight in the earlier stages, and of slow progress, gradually becoming more marked, especially in the lower limbs. The patients are usually bedridden a long time, and often grinding their teeth.

4. There is a peculiar absence of epileptiform and apoplectic seizures, and of marked general tremulation.

5. There is a peculiar absence of sensory symptoms, save for blunting of sensibility as the disease progresses.

GROUP III. The principal changes are thus described.

1. The left hemisphere is much more diseased than the rest, and is more or less atrophied.

2. There is usually atrophy of the cortical substance, most marked in the frontal lobes, but occasionally marked elsewhere. It is usually pale, or pale and mottled by vascular redness; and is sometimes softened, at other times indurated in a portion of its extent, each change being much more marked in the left hemisphere, and the frontal lobe being usually most affected. The white substance varies in consistence and vascularity.

3. Adhesion and decortication are found usually more on the left side, with equal frequency on the frontal and parietal lobes; while the temporo-sphenoidal lobes suffer very considerably, and the changes in question may be well marked on the inferior surfaces.

4. The basal ganglia are softened, and their vascularity is altered either way; as are also the vascularity and the consistence of the pons, medulla oblongata, and cerebellum.

5. The purely meningeal changes are generally well marked, are either symmetrical or predominate over the left hemisphere, and are often well seen over the base.

The principal clinical features are as follows.

1. In the stage of mental alteration preceding that of mental alienation recognised by the friends as such, the patients often are very eccentric, odd, restless, fidgety, and occasionally excited.

2. Dementia, well marked, early, and predominant, is frequent.

3. Melancholic delusions of harm, annoyance, fear, suspicion, are equally frequent, and with them are feelings of alarm and apprehension; or the patient is querulous and irascible, or dejected and weeping.

4. Occasionally there is early maniacal excitement, with irritable passionate outbursts, while exalted delusion or some largeness of idea now and then occur either at an early or at a later period.

5. The latter course is generally one of extreme dementia, sometimes with a dash of melancholia or even extravagant delusion.

6. Sometimes destructive, threatening, or violent, the patients generally become tractable towards the last, but of degraded habits.

7. Muscular ataxy and paresis are well marked, motor restlessness is frequent. Finally, the patients are bedridden with flexed contraction of limbs.

8. Hemiplegia is more or less marked and frequent in all; it is generally epileptic in origin, while more limited temporary palsies following local spasmodic movements are frequent.

9. Epileptiform attacks, hemispasm, local spasm, are very frequent; and *tremor coactus* is not unfre-

quent; apoplectic attacks and aphasia are sometimes observed.

10. Occasionally hallucinations, general obtuseness of sensibility or local anæsthesia.

GROUP IV. The principal changes are these.

1. The morbid lesions are much more marked in the right than in the left cerebral hemisphere. The general description of the changes in the left hemisphere in the last group is here transferred to the right, and of the right in the third group to the left in this. The cerebral vascularity is, however, rather greater in this fourth group.

2. The adhesion and decortication are usually more marked in the right hemisphere, occur mostly over the parietal lobe, often on the posterior part of the frontal and on the temporo-sphenoidal, and occasionally upon points of the internal surface or base.

3. The other changes are much as in the third group.

The principal clinical features are the following.

1. The disease is occasionally preceded by a history of strangeness and peculiarity of conduct; the outbreak generally begins with ambitious delirium, with or without active maniacal agitation, and violent, destructive, and dangerous tendencies. At first there is usually complacency, elation, or exaltation of feeling.

2. Now and then there is dementia, with fidgety, mischievous, restless, slovenly, or destructive tendencies.

3. Later, there are often exaggerated or exalted notions alternating with conditions in which the patients are foul-mouthed, querulous, morose, irritable, depressed, or in dread; or the latter state comes to predominate entirely.

4. At first there may be the expression of an undiscerning generosity, which is replaced later by an abusive and foul manner of address, often with degraded habits and destructive or dangerous tendencies.

5. The muscular ataxy and paresis are of the ordinary type. Occasionally there is great tremulousness, or, again, tremor, as in paralysis agitans. Hemiplegia is frequent, sometimes occurring as a simply paralytic seizure, sometimes following epileptiform attacks, and sometimes due to embolism or to hæmorrhage.

6. Epileptiform seizures are very frequent.

7. Sensation is blunted in the later stages; occasionally there are hallucinations of sight and hearing, blindness, or hypochondriacal sensations.

GROUP V. The principal changes are these.

1. There is local induration of the cerebral cortex, sometimes of wide distribution in its lesser degrees, most marked in the frontal lobes or their anterior portions, and affecting either one hemisphere or both.

2. The indurated cortical substance, generally of a decided reddish colour, is occasionally pale. It is usually atrophied. The non-indurate cortical substance is of ordinary colour, or pale.

3. The white substance, generally of slightly increased consistence, may be fairly vascular or paler than usual.

4. The adhesion and decortication, absent in one case, were in others unequal in the two hemispheres; they occurred mostly on the parietal, often on the posterior part of the frontal, and on the temporo-sphenoidal, now and then on the internal surfaces, and in one case were highly marked on the inferior surface.

Generally there were changes in the parts at the base of the brain and in the spinal cord.

5. The purely meningeal changes were well marked, and of very wide distribution.

The principal clinical features of this group are as follows.

1. Mental symptoms are various and varying. Some suffered mainly from symptoms of mental depression, others of dementia, and others of maniacal agitation and emotional exaltation.

2. Complacency, passionate irascible outbursts, gloom, depression, or apprehension, were observed in various cases.

3. All were indifferent to their degraded habits, and some were docile throughout, but others were at some periods either destructive or quarrelsome and abusive.

4. Muscular ataxy and paresis fairly marked. At the last the patients were usually bedridden, with flexed contractions of the limbs.

5. Epileptiform fits, hemispasm, often followed by epileptic hemiplegia, were very frequent. Local spasms, followed by more limited incomplete palsies, were not infrequent. Sometimes tremor coactus, or, again, choreiform movements, were observed, or apoplectiform seizures, some with, some without convulsive movements. Besides these, several had less grave attacks of heaviness, drowsiness, and semistupor.

6. A few showed hallucinations of special senses, or marked anæsthesia, or early headache.

CHARLES ALDRIDGE, M.D.

#### COIGNARD ON THE INFLUENCE OF ALKALINE MINERAL WATERS ON THE PROPORTIONS OF THE IMMEDIATE PRINCIPLES OF URINE.

DR. COIGNARD'S observations (*Journal de Thérapeutique*, 25th March 1878) have been made at Cusset, a small establishment about a mile and a half distant from Vichy. Its waters resemble those of the latter place, and a recent analysis makes them contain a somewhat larger quantity of carbonate of soda than the Vichy springs. But that is a matter of comparatively little importance. It is the action of all alkaline waters that Dr. Coignard has been investigating.

With this object, the amount of the elements of urine eliminated daily by patients under treatment at Cusset has been carefully determined. The treatment usually extends over three weeks. The amounts eliminated are given in tables, the general results of which are as follows.

In all the diabetic patients there was constant diminution of sugar, and slight but distinct augmentation of urea, which was all the more important, as there had been no previous diminution of it in the patients. A young man aged 21, of remarkable obesity, lost all his fat, and at the same time the quantity of urea increased. It cannot, therefore, be said that the alkalines diminish combustion: they make it more perfect, for it is always the urea that increases in amount. An anæmic patient left with his health re-established and a constant preponderance of urea over urates: the alkaline treatment, therefore, produced no anæmia or wasting in him.

A patient, broken down by a tropical affection of the liver, arrived, passing 11 grammes of urea and

1.50 grammes of uric acid. After a month's treatment, the water yielded 40.90 grammes of urea and 724 milligrammes of uric acid. Thus the completeness of the nutritive combustion was proved by the immense augmentation of urea and great diminution of uric acid.

Without quoting other cases, it may be affirmed that the constant result of the use of these waters has been to diminish notably the quantity of uric acid, and augment the urea more or less; in other words, to make the proportion of urea predominate over that of uric acid.

It is therefore plain that these waters favour the elimination of the albuminoids under the form of urea; that is to say, in a state of the most perfect combustion, and after they have produced the greatest amount of organic force. This is shown clinically in anæmic patients (in whom uric sand is frequent, and proves imperfect nutrition and incomplete utilisation of the albuminoids), by the augmentation of strength and of nutrition, which proceeds parallelly with the disappearance of the sand. It is therefore a capital error, and the more dangerous because it is widely spread, to say that alkaline waters are anæmiating and deglobulising in their action. On the contrary, they improve nutrition and utilise the albuminoid principle in the highest degree.

It is important to remark that this observation applies only to alkaline waters, not to the pure and simple use of plain alkalies, which in large and continued doses are undoubtedly lowering.

The pharmaceutical alkalies are remedies for acute diseases, the alkaline mineral waters are the modifiers of chronic diseases, and this by apparently opposite processes. Diabetes, albuminuria, and still more certainly uricæmia, being only the results of disturbed nutrition, of imperfect assimilation, and of disintegration of substance, it is clear that the restoration of healthy nutrition is an object for which mineral waters are perfectly applicable.

The hepatic generation of sugar is occasioned by the separation of the albuminoids into glycogene and biliary acids, and the excessive production of sugar is the direct cause of diabetes: and Lehmann has proved that alkalies diminish the bile and moderate the generation of sugar.

Although a perfect theory of diabetes has still to be found, no one can doubt the clinical fact of the improvement, and sometimes of the cure, of diabetes by alkaline waters.

The most obvious fact observable in patients who use these waters is the diminution of the amount of uric acid eliminated, and it is difficult not to admit that this is the key to the amelioration of all the manifestations of the uric and arthritic diathesis. Almost all cases of rheumatism have uric acid in excess. This is indeed the great characteristic of rheumatism.

The cure of gall-stones, which is almost constant, is the result of elimination of the bile and of the cholesterine, of the fluidification of the mucus of the biliary passages, and of the cure of the biliary catarrh.

As for the occasional amendment of some cases of albuminuria under the use of these waters, is it due to improved assimilation, to a certain diuretic action of the waters like that of milk in nephritic albuminuria? or is it due to the diminution of uric acid? These are grave questions, which as yet are far from having been solved.

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# URTEL ON THE HYPODERMIC INJECTION OF CHLORAL AS A HYPNOTIC.

A PAPER on this subject, with eight illustrative cases, occurs in the *Allgemeine Zeitschrift für Psychiatrie*, Band 35, Heft 2.

The experiments made by the author were attended with favourable results ; rest was obtained by means of the chloral injections, for even the most excited lunatics upon whom all the usual hypnotics had had no effect. Occasionally morphia was added to the chloral, but without causing any apparent difference in its action. The solution used at first consisted of equal parts by weight of chloral on the one hand, and of glycerine and water on the other ; the glycerine was soon omitted, as it was found to make the solution inconveniently viscid. Later on the solution used was doubled in strength, and consisted of two parts by weight of chloral-hydrate to one of water. It was hoped that by adding a small quantity of morphia to the injections, a more powerful action would be obtained, so that the number of injections necessary might be diminished, also that the pain attending the injections would be lessened ; neither of these results was, however, attained. The author's cases are briefly as follows.

CASE I. Fräulein G., aged 26, insane ten years, was subject to great maniacal excitement, and was extremely destructive ; she had taken various hypnotics, and latterly had been taking internally bromide of potassium with chloral until she had become quite stupid, and conjunctivitis had been caused, without, however, having obtained any rest either by day or night. Ten grains of chloral were injected subcutaneously morning and evening on the first day on which the treatment was tried ; that night, the patient had her first night's rest for weeks. The injections were repeated every evening in doses varying from ten to twenty grains, being usually fifteen grains. The solution was injected on different occasions under the skin of the upper pectoral region, the shoulders, both arms and fore-arms. The application was always very painful. On only two nights out of thirty-nine was the patient restless for a few hours ; on all the others the full hypnotic action was developed. Soon after the commencement of the treatment the patient became quieter also in the daytime. Three times the treatment was suspended ; the first time experimentally for two nights ; on the second night the patient was again noisy. The second time it was stopped for three weeks, as she had become quiet ; at the end of this period the excitement returned, the injections were resumed, and the desired result was again obtained. A third time the treatment was suspended for two nights, and lactate of soda was tried instead, but proved ineffectual. The treatment was finally discontinued two months after its commencement, a small round ulcer having formed upon the left shoulder. The nutrition of the patient had not suffered during the treatment ; the conjunctivitis which had been present at its commencement had been cured in a few days. Immediately the injections were discontinued, the nightly restlessness and excitement recommenced, notwithstanding the internal administration of chloral and morphia combined.

CASE II. Fräulein W., aged 19, insane one year, in a very maniacal condition, had taken internally chloral, chloral with morphia, bromide of potassium with and without chloral, until toxic symptoms had been caused ; prolonged baths, beer at night, quinine, subcutaneous injections of nearly a grain of morphia,

had also been tried. None of these methods had produced any lasting benefit ; the patient was in a very exhausted condition, and presented many self-inflicted wounds and bruises. Ten grains of chloral were used for the first injection, and the patient slept quietly all night. On fifteen consecutive evenings the injections were repeated in doses varying from ten to thirty grains, usually the latter. The injections always caused great pain, although the patient was usually anything but sensitive, and at times almost anæsthetic. The treatment had to be discontinued, owing to its having caused local troubles ; during its progress the patient's nutrition had markedly improved. On four nights only was the patient restless for a time, and this was ascribed to the ulcers due to the injections, and to the patient's habit of irritating them.

CASE III. Herr M., aged 51, insane nearly three years, suffered from a secondary psychosis, with long periods of intense excitement, during which his incessant crying and destructive habits gave immense trouble. His bodily health was bad ; there was a previous tendency to suppurations. After an injection of ten grains of chloral, the patient slept half the night ; the next two nights, after similar doses, he was only restless for a short time ; the dose was raised with complete and lasting success ; even on the fourth day the patient was able to associate with the others, and did not injure his clothing. He expressed himself as most grateful for the treatment, and begged for its continuance, in spite of the great pain it caused. The injections were administered every evening for a fortnight ; the patient having then become quiet, they were omitted for another fortnight, but at the end of that time they were resumed for two days, in doses of forty-five grains with the addition of half a grain of morphia ; on the first of these two nights the patient was restless, on the second the hypnotic action was fully developed, but the treatment was now finally discontinued, owing to the causation of abscesses and ulcers. During the first fortnight the drug partially failed of its effect only on the first three and on one other night, when the dose used was too small. The patient always asked to have the injection made under the skin of the chest, as in that situation it always acted most quickly and strongly. During the subcutaneous treatment the patient's nutrition had visibly improved, and soon after its cessation he was in his old excited condition.

CASE IV. Frau Sp., aged 40, insane three years, the subject of hallucinations, was constantly excited and crying ; her bodily health was much impaired. Prolonged baths, beer at night, chloral *per os* and *per anum*, also subcutaneous injections of morphia up to three quarters of a grain, had previously proved ineffectual. On the first night, after an injection of ten grains of chloral, the patient was still restless, but on the second, when twenty grains were used, perfect rest and sleep were obtained. Out of twenty-one subsequent occasions when the treatment was applied, the patient had four sleepless nights and three others partially so, all of which were due either to her being disturbed by other patients or to the local effects of the injections. The doses in this case varied from ten to thirty grains, most frequently the latter ; on the last six evenings about a quarter of a grain of morphia was added to the thirty grains of chloral.

CASE V. Frau F., aged 65, was suffering for the eighth time during thirty-eight years from mania ; nutrition was considerably impaired. Chloral with

morphia internally, and prolonged baths, had proved ineffectual. On eighteen evenings, injections of from eight to thirty grains of chloral were given; on the last two occasions morphia was added to the full dose of chloral. The pain was always great. On one night the drug failed to act, owing to the dose being too small, but on nine others it proved ineffectual, and on three more partially so. This bad result is partly ascribable to external causes, *e.g.*, disturbance by other patients; partly, also, to a painful, circumscribed, inflammatory swelling of the left forearm, which was apparently caused by the injections, but which ended in resolution, without the formation of an abscess. Later on a deep ulcer was caused on the right arm, which led to the treatment being discontinued, although the patient had not yet become quiet.

CASE VI. Frau M., aged 45, three months insane, was suffering from her fourth attack of mania. She had recently been taking internally eighty grains of chloral and three quarters of a grain of morphia in the twenty-four hours, but continued nevertheless to talk night and day. On sixteen evenings the injections were given her in doses of from eight to thirty grains, usually the smaller quantity. Pain was generally great. On only one night the treatment partially failed in its effect, and that was the first evening on which the more concentrated solution was used, which, in this case only, caused greater pain than the weaker one. Hard, circumscribed swellings, and also superficial excoriations, were caused by the treatment, but it was not discontinued until the excitement of the patient had subsided.

CASE VII. Frau St., aged 60, maniacal seven weeks, physically much reduced, previously treated with chloral up to eighty grains at a dose, chloral with morphia, and lactate of soda, without having obtained rest, passed her first quiet night after an injection of twenty-three grains of chloral. The treatment was repeated on ten evenings in doses of from fifteen to thirty grains; it was always very painful; its action only failed on one night. The patient becoming quiet and an ulcer having formed, the injections were discontinued; the patient did not again become excited.

CASE VIII. Fraulein F., aged 62, insane over twenty years, subject to prolonged periods of excitement with destructive habits, had taken latterly forty-five grains of chloral with half a grain of morphia, without effect. On six evenings injections were given of from eight to fifteen grains of chloral; the patient slept soundly throughout each night, and remained quiet after the treatment ceased.

The injections caused least pain when made under the skin of the upper part of the back; those in the chest were most painful, but appeared to act most surely and quickly. The treatment was, with perhaps the exception of Case 5, most successful; its occasional failure to produce sleep could almost always be explained by the dose having been too small, by the patient having been molested from without, by the occasional painful oedema caused by the injections, or by the excoriations or ulcers which were caused by the solution running over the skin, generally after escaping through the original puncture. This latter trouble may usually be prevented by smearing the skin with oil before giving the injection. The patients, moreover, often removed their dressings and irritated their sores in various ways. Abscesses only rarely occurred, and then quickly became ulcers. Ulcers were formed only in

the proportion of 5.4 per cent. to injections given. The process of the formation of an ulcer was usually as follows. In the inflamed, red, swollen neighbourhood of the puncture, small vesicles containing sero-purulent fluid were formed; these became confluent, and formed a scab; when this latter was thrown off the ulcer remained; it was mostly circular, with sharply-cut edges, as if it had been punched out; it left behind an equally circular scar, covered with very thin and brownly pigmented skin on a lower level than the surrounding surface, and remaining unchanged for a long time. The escape of the chloral solution on to the skin causes the latter to swell in a manner resembling urticaria, and gives rise to burning pain. The local swellings, which were frequently developed in all the cases in the neighbourhood of the injection punctures, very seldom developed into abscesses; even after considerable redness and induration had been developed, they almost always became quickly absorbed.

In addition to the rapid and certain hypnotic action of this method of treatment, the absence of toxic symptoms in any one of the cases, notwithstanding the prolonged use of the injections, must be noted. The conjunctivitis which is so frequent and troublesome during the internal administration of chloral was not once seen. In Case I the patient rapidly recovered from this affection during the progress of the treatment. The disturbance of nutrition which often takes place during the internal use of chloral was also absent; in Cases II and III the patients' bodily condition markedly improved while they were being treated by the injections.

The author sums up the results of his experiments thus. The subcutaneous injection of chloral is a very certain and rapidly acting method of causing sleep. It is advisable, however, chiefly on account of the excessive pain it causes, to restrict its use as much as possible. It ought only to be resorted to either after all other means have been tried and have failed, or in urgent cases when it is imperative to induce sleep as quickly and certainly as possible.

C. S. W. COBBOLD, M.D.

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## THE TELEPHONE AS AN INSTRUMENT OF RESEARCH.

THE following summary of the scientific uses of the telephone is given by Dr. H. P. Bowditch in the *Boston Medical and Surgical Journal* for May 9th.

Though so short a time has elapsed since the invention of the telephone, it has already found numerous applications as an instrument of physical and physiological research.

Goltz (Pflüger's *Archiv*, Band xvi) has shown that the electrical currents produced in the conducting wires by the different vocal sounds may be used to irritate the motor nerves of the frog, and that contractions of different intensity correspond to the different vowel sounds, *a* and *o* producing the most powerful, and *i* (as in *mien*) the weakest stimulation. The result is the same whether the conducting wires of the telephone are connected directly with the primary coil of an induction apparatus the secondary currents of which furnish the stimulus.

Du Bois-Reymond (*Archiv für Physiologie*, 1877, p. 573) has made similar observations, and has also given reasons for regarding the telephonic transmission of sounds as an additional argument in favour of the theory of Helmholtz, that the timbre or



"clang-tint" of a sound is not altered by a change in the relative position of the component vibrations, causing them to combine in different phases. For he has shown by a mathematical discussion of the conditions under which the transmission occurs that a change of this sort must take place, and yet the sounds are transmitted unaltered in timbre from one telephone to the other.

Hermann (Pflüger's *Archiv*, Band xvi) has investigated the subject of telephonic transmission by induction, and has found not only that sounds may be transmitted unaltered when one telephone is connected with the primary and the other with the secondary coil of an induction apparatus (or still better with the two parts of a galvanometer coil), but that the result is not interfered with when several other coils are introduced between the hearing and speaking telephone, so that the sounds are produced in the latter by induced currents of the third, fourth, or even fifth order. In view of this fact, Hermann maintains that the law of induction, assumed by Du Bois-Reymond in his above-mentioned calculation, for some reason or other, cannot be applied to oscillatory changes of intensity, such as are produced by the telephone.

Hermann (*Ibid.*) has also employed the telephone as a means of studying the feeble electrical currents of muscles, and finds that when the longitudinal and transverse sections of a muscle are connected by unpolarisable electrodes with a telephone, and a mechanical interrupter included in the circuit, a noise is heard corresponding to the interruption. That the muscle-current is really the cause of the sound is proved by the fact that silence ensues when the electrodes are withdrawn from the muscle and placed in contact with each other. Although the constant current of the muscle at rest is thus readily demonstrated, all attempts to render audible the rapid variations of this current (the "action-current" of Hermann) which accompany a tetanic muscular contraction have as yet yielded only negative results. This is the more surprising from the fact that when tested with an ordinary induction-apparatus with a vibrating armature and a sliding secondary coil, the telephone responds with an audible sound to induced currents of so feeble intensity that they will not stimulate the most sensitive nerve-muscle preparation; yet when the nerve of this preparation is applied to the surface of a tetanically contracting muscle, the well-known phenomena of secondary tetanus ensue. It seems, therefore, that the telephone is more sensitive than the frog's nerve to the secondary currents of an induction-apparatus, while for the electrical currents which accompany muscular activity the reverse is the case.

To the currents produced by the thermopile, Hermann found the telephone very sensitive. If a telephone, a Heidenhain's thermopile, and a mechanical interrupter are included in an electrical circuit (the latter instrument being placed in an adjoining room on account of the noise produced), it is only necessary to bring a finger into the neighbourhood of one of the surfaces of the pile to hear a distinct noise. A similar use of the telephone in connection with a thermopile has also been described by Forbes (*Nature*, February 28, 1878).

Finally, it should be mentioned that the telephone affords a valuable method of testing the vibrating interrupters for electrical currents so commonly used in physiological researches. It is usually assumed that the number of interruptions corresponds to the number of vibrations as determined by the

tone of the vibrating spring. The accuracy of this assumption can be readily tested by observing whether a telephone included in the circuit gives the same tone as the interrupter.

It is not yet possible to speak with certainty of the value to the physiologist of that instrument which is so closely allied to the telephone, namely, the *phonograph*; but it is evident that it cannot fail to render important service in the study of vocalisation and articulation. For indications of the problems likely to be solved by its aid, the reader is referred to the communications of Jenkin and Ewing in *Nature* for March.

#### KLEMM ON MUSCLE-BEATING.

HERR KLEMM, the head of a gymnastic institution at Riga, has recently published a little book on *Muscle-Beating, or Active and Passive Home Gymnastics for Healthy and Unhealthy People*. He begins with an introductory chapter, in which he gives a history of muscle-rubbing and of medical gymnastics, so far as they have hitherto been employed; after which he passes on to consider the physiological bases for this system of treatment. Not being a medical man, he is obscure and not altogether accurate in this part of his subject. The principle of the treatment which has been practised for some years by the author depends upon the excitement of the capillary circulation of the skin and subjacent parts by the use of a little instrument made of India-rubber, with which the surface of the body is beaten with more or less force. The "beater" consists of three elastic tubes fastened together towards the handle; the circumference of each tube is about that of a finger, the length and the fineness of the material varying according to the different purposes for which the beater is used. We give a sketch of the method of using the beater to the back



and left side. The treatment by beating may be carried out either by the patients themselves, or it may be administered to them by others. Wherever

possible, Herr Klemm advises the patient to do the work for himself, as he thereby gains the double advantage of active exercise with passive manipulation. The beating should be very gentle at the commencement, then with increasing power, and, finally, again gently as at first, so that during the whole exercise the severity of the application is alternately being increased and diminished. Directions are given for the use of this exercise by people with cold hands and feet, in which case it should be continued until the circulation is thoroughly restored, and repeated at frequent intervals for several weeks or months. It is asserted that by the use of this method people suffering from excessive obesity may be much relieved, the blood being drawn into the systemic capillaries and visceral congestions thus removed. Muscle-beating is, however, only to be used as an adjunct to other modes of treatment, of which the observance of a carefully adjusted diet is the chief. Herr Klemm prescribes for such patients "strong manipulation of the lower limbs, a mild manipulation of the abdomen, strong manipulation of the arms, and a gentle manipulation of the chest, head, and back." The author strongly recommends this method of treatment for all persons suffering from stiff joints, whether as the result of chronic rheumatism, or of old inflammatory lesions. In such cases great perseverance is requisite, and, as soon as any movement of the joint is possible, passive movements should be superadded to the beating. Similarly, muscular rheumatism may be greatly improved by a system of beating, and it is hence of great use in lumbago. Combined with other gymnastic exercises, it is said to cure cases of lateral curvature, if begun at a sufficiently early stage of the disease, and in more advanced cases it is asserted that it prevents the deformity from becoming more marked. Herr Klemm reserves the detailed account of the various methods of application which he has found most useful in the several types of lateral curvature, for a special work which he is about to publish on the subject.

The author alleges that his system is applicable not only in cases where there is a mere mechanical difficulty to be overcome, but also in cases where a complicated function is disturbed; for instance, he asserts that most forms of sleeplessness may be relieved by beating the whole body over, so as to excite an active circulation in the entire cutaneous system. He says that, as a rule, in such cases the head itself should not be beaten; and in the case of excitable people, the beating should be practised several hours before retiring to rest. On the other hand, gentle beating of the head is said to be serviceable in cases of neuralgic headache, vertigo, and sleeplessness, where these are "caused by deficient nutrition of the brain". The beating should be applied especially to the frontal, temporal, and occipital regions, and it should last for from four to six minutes, divided into two periods with a pause between. Finally, the system may be used as a substitute for muscular exercise by cripples and by patients suffering from paralysis, or from other diseases which interfere with walking.

Herr Klemm concludes his work by an useful summary of directions for the employment of muscle-beating, of which the following are the most important. Each manipulation of muscle-beating must be practised as a *crescendo* and *decrescendo*; that is, the manipulation must be executed with greater force in the middle of the operation, and gently at the beginning and towards the end. The arms and

legs must always be manipulated more strongly; the head, chest, abdomen, and back gently. In all cases where there is a tendency to congestion of the viscera, the extremities, especially the legs, must always be beaten first. Each operation must be continued till a moderately increased feeling of heat is experienced in the manipulated part; there should be a pause every two or three minutes, that opportunity may be afforded for estimating the degree of warmth induced in the part operated on. No one part of the body should be beaten for more than ten minutes at a time, including the pause. The muscle-beating should be practised daily for at least six weeks, as that is the shortest time in which any permanent result can be looked for. As regards the exact mode of application, the author tells us that the strokes of the muscle-beater must not be applied flat, but in a sharp oblique direction. They must not follow one another too quickly, but should be repeated about twice a second. The application is best made in the morning, just immediately after washing.

W. ALLEN STURGE, M.D.

### BLAKE ON INHALATION OF NITROUS OXIDE AS A TONIC.

At the New York Obstetrical Society, February 19, 1878, Dr. J. Ellis Blake exhibited an apparatus for the administration of nitrous oxide gas in combination with air, as a tonic. It was, he said, possible to take a large quantity of the nitrous oxide without any unpleasant effects, provided a small quantity of air were given at the same time. Complete anaesthesia was impossible unless the air were entirely shut off. Dr. Blake thought the gas would prove very useful as a tonic, and said he had found an increase of appetite follow its administration, as the first effect. He considered it a much better way of supplying oxygen to the blood than the inhalation of pure oxygen gas, which seemed to have proved unsatisfactory.

Dr. Fordyce Barker said that in 1857 he was called to see a young lady suffering from tuberculous disease, who was attacked with severe capillary bronchitis. Every breath was a struggle, and she was cyanosed, and in an apparently hopeless condition. He determined to try oxygen gas, and was in search of it, when Dr. Doremus suggested nitrous oxide gas as better than pure oxygen, because absorbed much more rapidly. It was accordingly given, with some air, and the result was highly satisfactory. There was no anaesthesia, but breathing became perfectly easy, and the patient lived for three years afterward, and died of phthisis. In 1860 he had used the gas again in the same way, in a patient suffering from complete collapse after labour. The result was equally satisfactory. In a third case where he had employed it he had left the patient, as he supposed dying, but had advised keeping up the gas, and recovery took place. He had now a patient on whom Dr. Blake was using the gas. The improvement was already very marked.

Dr. Blake said he administered four to five gallons once a day, for four or five days. He found that it enabled the patient to sleep well.

Dr. Barker mentioned that in his patients it also caused a tendency to sound, refreshing sleep.

Dr. Skene referred to a paper on the subject by Dr. G. W. Brush, in the *Transactions of the King's County Medical Society* for December 1877. He was



surprised to hear from Dr. Blake that the administration of oxygen gas was a failure. In some experiments made with it in Brooklyn, excellent results were obtained.

Dr. Mann mentioned some experiments made in the old New York Hospital, where he had the care of twelve patients who took oxygen gas. They were very much improved by it, and gained in weight every week during the month it was given.

Dr. Barker said that some years ago he had tried oxygen gas, but had been disappointed in its effects.

### ONIMUS ON THE VALUE OF CONTINUED CURRENTS.

M. ONIMUS, at the meeting of the Société de Biologie, May 11th (*Gazette Médicale de Paris*), replied to M. Tessier's thesis "On the Value of Continued Currents", which was founded chiefly on M. Chauveau's experiments and M. Vulpian's opinions.

M. Onimus has before stated that many experimenters arrive at false conclusions, because they apply continued currents directly on the nerves. He agrees with Faraday that the voltaic current has a chemical action on the circulation, whilst induced currents have a mechanical action. If the poles of an apparatus with the continued current be placed in a solution of starch and iodide of potassium, the water will immediately become blue, showing that chemical action has taken place. When the reophores with a continued current are placed directly over a nerve, however short the duration, and however feeble the action, there is immediate chemical as well as electrolytic action. Thus, when M. Vulpian obtained arrest of the heart's action by means of the continued current, the action of the current was almost effaced by the generation of bases and acids in the muscular tissue, so that the experiment proves nothing with regard to electrolytic action properly so called. So also, when MM. Chauveau and Vulpian electrified vaso-motor nerves, they got contraction of the vessels; when M. Onimus made the experiment on a frog's foot without directly affecting the nerves, the ascending current produced contraction, and the descending current in a few seconds caused dilatation of the vessels. M. Chauveau, in passing a current transversely to the sympathetic nerve, found that the descending current caused irritation of the vaso-motor nerves of the head, but less energetic than that of the ascending current. This difference is astonishing, for, as the chemical action is more active at the negative pole, the peripheral irritation might be supposed to be stronger in the descending current. The reophores of continuous currents should never be applied directly over the nerves if one would judge of the therapeutic value of such currents; the nerve should always be protected by other tissues, and the electric influence thus reaches the nerve-fibres as easily as when it is directly applied.

M. Onimus wishes it to be understood that he does not insist on these facts merely to support his own opinions, though they are founded on repeated and numerous experiments; this discussion leads higher, for the laws he has established confute unipolar excitation and the laws of electrotonus.

M. Benedict has said that the therapeutic efficiency of the different directions of currents is a mere presumptuous theory, but there is no proof in support of this assertion. On the contrary, M. Onimus has been able to indicate the direction of the current in

cases of tetanus from the reactions experienced by the patient; and in M. Tessier's thesis further convincing proofs are found. M. Tessier, senior, observed that when the descending current was applied to the vertebral column in cases of locomotor ataxy, a hæmorrhoidal flux was induced, and when the ascending current was used, cerebral excitement followed. Truly, this result may not be produced in all cases, but neither does opium produce in all patients a soporific effect. It is of the utmost importance, in the pursuit of this study, to have marked facts round which details may be grouped, this being the only means of advancing more surely and less empirically.

### OULMONT ON ATHETOSIS.\*

DR. OULMONT, during his residence in the Salpêtrière under M. Charcot, had the opportunity of studying several patients afflicted with athetosis, an affection little known as yet, and of which the name even was until lately almost ignored in France. The history of athetosis is of very recent date; it was first named in 1871 by Hammond of New York, who devoted a chapter to it in his treatise *On Diseases of the Nervous System*. Some years before Charcot (1853) and Heisse (1860) had described phenomena analogous to those defined by Hammond; and, since the labours of the latter, several other observers have spoken of athetosis, chiefly in America and in England.

Athetosis (*âthéros*, without fixed position) is characterised, according to Hammond, by "the impossibility which the patients find of keeping their fingers and toes in any desired position, and by the continual movement of the same".

The name of athetosis, like that of chorea, says M. Oulmont, is a general appellation, comprising varieties which are very different in point of progress and symptomatology. Athetosis may be unilateral (hemi-athetosis) or double. M. Oulmont has studied both forms in a series of thirty-seven clinical observations, from which he has drawn the following conclusions.

1. There are, in what is described under the name of athetosis, two entirely distinct forms which must be completely separated; unilateral or hemiathetosis, and double or general athetosis.
2. Hemiathetosis consists of slow, exaggerated, involuntary movements, limited to the foot and hand of one side of the body, and now and then occupying the corresponding half of the face and neck.
3. To these movements are generally added transitory contractions or intermittent spasms, which are simple modifications of athetotic movements, a sort of intermediate stage between the mobility of athetosis and the rigidity of post-hemiplegic contraction. They may attack all parts of the upper extremity, but in the lower extremity they rarely pass the instep.
4. The movements are involuntary, little modified by the will, and often exaggerated by it. They persist during rest, often even during sleep, at least to the degree of fixing the limb in an abnormal position.
5. Hemiathetosis appears nearly always on the paralysed side during the course of motor hemiplegia.
6. It coincides, in the great majority of cases, with more or less complete hemianæsthesia of the same side.
7. The other symptoms which may accompany it, namely permanent contraction, rigidity, and

\* *Etude clinique sur l'Athétose*, par le Dr. P. Oulmont. Paris, 1878.

atrophy, with laxity of the articular ligaments, do not depend on the athetosis, but on the hemiplegia itself. Articular relaxation in particular is specially marked. 8. Hemiatetosis resembles hemichorea; like it, it is the symptom of a cerebral lesion of some sort, without doubt in the neighbourhood of the lesion which produces hemichorea, that is to say, the fibres in front and outside of the sensory bundles at the lower part of the corona radiata (of Reil). In cases where motor or sensory hemiplegia, or both, are absent, it may be admitted that there is such a tendency to concentration, that it attacks the athetotic fasciculi at a place where the sensory and motor bundles, united at the lower part of the internal capsule, are already dissociated. 9. Hemiatetosis and hemichorea, very distinct varieties of posthemiplegic disorders, may be united by various forms of actual tremblings, transitional states in which the characters of both are blended. 10. Double athetosis presents the same clinical aspects as hemiatetosis, except that the movements exist on both sides of the body. The face seems to be attacked more constantly and more severely than in the unilateral form. 11. It is not accompanied by any disorder of movement or of sensibility. 12. Its nature is unknown; still it may be admitted that there is between it and hemiatetosis the same relation as there is between chorea and hemichorea.

## ANATOMY AND PHYSIOLOGY.

### ARNOLD ON THE FIRST SOUND OF THE HEART.

—In the *New York Medical Journal* for April 1878, Dr. Arnold records some interesting experiments to ascertain the part muscular contraction takes in the production of the first sound of the heart. Dr. Arnold introduces his subject by a reference to the researches of Williams, Halford, and the London Committee of the British Scientific Association, bearing upon the sounds of the heart. He observes that the investigations of Wollaston, and more recently of Helmholtz, Houghton, Natanson, and others, leave no doubt at the present day, that a contracting muscle gives forth a sound. Taking the heart as, for the purpose he has in view, essentially a striated voluntary muscle, Dr. Arnold takes the proportion of striated muscle as the basis of experiment and comparison. Many consider that the ventricular systole is essentially the same in all animals, and that it is precisely like the shock of an ordinary muscle, the only difference being that of duration. Dr. Arnold's experiments were calculated first to record the form and duration of the heart's contraction. For this purpose, several dogs were experimented upon, the medulla spinalis being either first destroyed or woarara administered, and artificial respiration maintained. A link was fastened to the exposed apex of the heart and connected by means of a fine wire with the tambour of a cardiograph, the receding cylinder connected with which made one revolution in ten seconds. An electro-magnetic chromograph, having a quill writer attached to the vibrating spring, wrote 100 vibrations per second upon the cylinder as it revolved, and thus served to measure small fractions of time. At the moment of taking an observation, the artificial respiration was interrupted for ten seconds, *i. e.*, during one revolution of the cylinder.

By means of tracings thus obtained, the contraction

and relaxation of the cardiac muscle forming a complete muscular act could be measured, and similarly the contractions alone, and the relaxations alone. The dog's heart was thus found to have a duration of 0.29925 sec. for the entire contraction, the time of contraction alone being 0.14566, of relaxation, 0.15359.

The next point of inquiry was to compare the form and duration of the heart's contraction with that of the gastrocnemius, a voluntary muscle.

The gastrocnemius muscle of the dog or the frog being chosen, a hook was passed into the divided tendo Achillis, and connected with the myograph as before, and the muscle galvanised. Tracings were thus taken which, in form and duration, were exactly comparable with those yielded by contractions of the cardiac muscle. The average time for the contraction of this muscle was found to be a little less than that of the heart, being 0.21665 sec.; contraction alone 0.1279 sec., relaxation alone 0.1279 sec. The entire difference was 0.082 sec.

To estimate the time occupied by the systole of the human heart, Donders (*Nederlandsch Archiv voor Genees- en Natuurkunde*, Bd. ii, 1865) had measured the intervals between the first and second sounds and the relations between this and the whole cardiac period, and thus obtained a duration of 0.309 sec. to 0.327 sec. Thurston (*Four. of Anatomy and Physiology* vol. x, part iii, 1876, p. 494 *et seq.*) obtained almost identical results from sphygmographic calculations. Garrod, with whom Thurston agrees, observes that the duration of cardiac systole varies as the cube root of the pulse-rate. The duration of a muscular shock in man, *i. e.*, including contraction and relaxation, is 0.30 sec. at the outside, thus still allowing an excess of time of .027 for the cardiac contraction.

The third point for experiment was to auscultate the heart under varied conditions.

Under this heading, the heart was auscultated during systole, both before and after the auriculo-ventricular valves and the chordæ tendineæ had been destroyed, and the first sound is stated to have been still audible under the latter conditions.

Under the further heading for inquiry, *viz.*, to examine the electrical condition of the heart during systole, Dr. Arnold had not completed his experiments. He concludes by asking whether, from the facts shown, the conclusion may not be drawn that there does exist a muscular element in the first sound of the heart?

R. DOUGLAS POWELL, M.D.

HAYEM ON HÆMATOBLASTS.—M. G. Hayem, in a paper read before the Société de Biologie (*Gazette Médicale de Paris*, June 1878), has sought to verify by experiments on new-born cats the facts advanced by Kölliker (*Würzb. Verhandlungen*, Band vii; and *Elements of Human Histology*) regarding the origin of the elements of the blood, *viz.*, the presence of colourless and granular red blood-corpuscles, as well as of red nucleated corpuscles in the blood of young mammalia (cats, dogs, mice).

M. Hayem says that, in pure blood, nearly all red corpuscles become spinous, which, however, does not prevent them from being disposed in rouleaux, between which are many small bodies, solitary or in groups. These bodies are hæmatoblasts; they soon undergo modifications analogous to those in the blood of man. There are also innumerable bright small granules in the plasma, which give it a milky appearance; these are found in all young animals fed by milk, except in children.

The following are the most important facts arrived



at by M. Hayem in studying hæmatoblasts in the blood of the new-born cat. The red blood-corpuscles vary considerably in size, they do not possess a nucleus. The white blood-corpuscles have a large nucleus and a comparatively small covering of albumen, which is not contractile. The hæmatoblasts are somewhat different from those of human blood; they are pale delicate bodies, round or oval, rarely concave; some are colourless and others yellow, many become spiny and bristle with very fine points. They nearly all unite to form yellowish masses with irregular borders; in a few hours these masses become more homogeneous, and a number of vesicles or vacuoles make their appearance. The fibrinous network is indistinct in pure blood, but, after treatment with iodine and serum, very fine filaments may be observed at the angles of the masses. In this preparation the hæmatoblasts are less altered than in pure blood, they are solitary or in small groups, many become spinous; in shape they are ovoid, elongated, and remain so in whatever position they are placed; some are coloured, others pale, homogeneous, and slightly vitreous. In preparations made with osmic acid, the walls of the hæmatoblasts seem slightly retracted but not spinous. Small yellow spots like vesicles sometimes appear in their substance, but no nucleus has been discovered. There are no nucleated red blood-corpuscles in the blood of the new-born cat. The hæmatoblasts are less than the smallest white blood-corpuscles; it would be impossible for them to arise from a transformation of the latter. In rapidly made preparations of dried blood the hæmatoblasts are perfectly preserved; they are always grouped in masses, the elements being generally distinct, ovoid, yellowish green, and of a peculiar glittering appearance. Some solitary ones are almost discoid, slightly coloured and crenulated. Hæmatoblasts have very similar reactions in the blood of all vertebrates, not differing between themselves more than do the red blood-corpuscles. The same elements are found in splenic blood as in that taken from other parts of the body, but there are more small white uninucleated corpuscles in it than in other blood.

**MALASSEZ ON MOVEMENT OF THE LOWER LIP FOLLOWING STIMULATION OF THE UPPER.**—In a paper read before the Société de Biologie in Paris on March 2, M. Malassez said that he had found by experiments on a dog under the influence of morphia, that on irritation of the upper lip at the junction of the mucous membrane with the skin, reflex action of the lower lip is produced, which is strongest in the middle line, and disappears at from six to eight-tenths of an inch on each side of it. The question whether this movement is general in a certain group of animals, and whether it takes a part in prehension, requires further investigation.

**D'ARSONVAL ON THE SENSIBILITY OF NERVES TO ELECTRICAL STIMULI.**—At the same meeting, M. D'Arsonval stated that, in galvanising the lumbar nerves of a frog with the interrupted current, he found that a degree of intensity, which had not power to cause contraction of the muscles, when applied to the telephone, set the membrane of that instrument in vibration. He proposes to utilise this fact in studying various nervous phenomena.

**KREIDMANN ON THE DEPRESSOR NERVE IN MAN AND IN THE DOG.**—Kriedmann, in the *Centralblatt für die Medicinischen Wissenschaften*, 1878,

No. xi, p. 193, states that on opening the sheath of the vagus, he finds not a single nerve-trunk, but several branches. From the internal branch, the superior laryngeal goes off: this in turn gives off a nerve-twig, which is sometimes large, and sometimes much finer; it receives a larger or smaller branch coming off from the pneumogastric, and again joins the inner branch of the vagus after a separate course of 2 or 3 centimetres (.8 to 1.2 inches). This nerve, which may be looked upon as the depressor, presents the peculiarity of being enclosed in the sheath of the vagus, as it is in the dog; and in this respect it differs from all other animals. Anatomically this nerve, both from its origin and its course, should be the depressor, but the hypothesis has not yet been confirmed by physiology.

D'ARCY POWER, B.A.Oxon.

## RECENT PAPERS.

The Etiology of Deformities. By Dr. Zuckerkandl. (*Allgemeine Wiener Medizin. Zeitung*, June 18.)  
The Action of Pancreatin on the Blood. By Dr. P. Albertoni. (*Lo Sperimentale*, June.)  
An Experimental Proof of the Imperfect Decussation of the Optic Nerves in the Chiasma. By Dr. W. Nicati. (*Centralblatt für die Medicinischen Wissenschaften*, June 22.)

## PATHOLOGY.

**BAUMGARTEN ON SYPHILITIC ARTERITIS.**—Dr. Paul Baumgarten (Virchow's *Archiv*, Band lxx, Heft 1) on the grounds of certain experimental researches into the process of obliterative arteritis, opposes the view of Friedländer and others that the new growth in the lumen of the vessel is entirely derived from the wandering cells from the vasa vasorum; he contends, on the contrary, that the epithelioid tissue swells and proliferates to form an indifferent embryonic tissue. He describes the microscopic appearances he found in a case of syphilitic inflammation of the middle cerebral artery; and while agreeing in the main with Heubner as to the facts, he denies any specific character to the growth in the lumen, which he characterises as consisting of the ordinary indifferent tissue found in all cases of obliterative arteritis; but he admits that the affection of the outer coats presents the histological features of gumma, and so far he admits that we are justified in regarding the affection as syphilitic, although the process of obliteration takes place in the same manner and by the same means as arteritis of non-specific origin, namely, by the growth of indifferent tissue originating in the epithelioid lining.

**SENATOR ON CHRONIC INTERSTITIAL NEPHRITIS.**—Dr. Senator, of Berlin (Virchow's *Archiv*, Band lxxiii, Heft 1) reviews our present knowledge of this disease. He more especially draws attention to the hypertrophy of the heart which, he says, is frequently unaccompanied by dilatation, and is, therefore, not recognisable in many cases during life or in certain stages. He does not attempt to settle the vexed question of the changes in the arterioles, but inclines to the view of Ewald and Thoma, that they may be regarded as coming under the general class of conditions described by Friedländer as endarteritis obliterans.

ROBERT SAUNDEY, M.D.

**SMITH ON EXOPHTHALMIC GOITRE: LESIONS OF THE CERVICAL GANGLIA.**—Dr. R. Shingleton Smith

records (*Medical Times and Gazette*, June 1878, p. 647) a typical case of Graves's disease, in which, after death, definite lesions of the cervical sympathetic system—both coarse and microscopic, the one affecting a single ganglion, the other affecting all the cervical ganglia—were observed.

Margaret W., aged 20, domestic servant, was admitted October 11, 1877, with a condition of well-marked exophthalmic goitre. She herself had noticed the symptoms for seven months. Her mother stated that for years she had had shortness of breath, and "always had large eyes"; she had been engaged for twelve months, and married March 31, 1877, at which date she was fairly well. Her married life had been unhappy; she had menstruated twice only after her marriage. Three years before, she had amenorrhœa for several months. A month after her marriage the eyes were more prominent than usual, and she complained of feeling generally unwell; the complexion was "dirty"; palpitation on one occasion lasted the night, otherwise she had not complained of this symptom; formerly she was amiable, since her illness had become irritable and quick-tempered. On admission, her condition was as follows. She was weak, emaciated, looking older than her age. Her eyes were very prominent, the neck was enlarged, the face dusky. She complained of dyspnœa, palpitation, and vomiting; the eyeballs were equally prominent: the conjunctivæ were much injected. The neck measured fourteen inches around the centre of the thyroid. Both thyroid lobes were equally enlarged, with large tortuous arteries meandering over the surfaces. The face was cyanotic; the veins were distended; pulse 140, small, weak; heart and lung sounds healthy; urine sp. gr. 1015, healthy. Day by day she became weaker and weaker, the thyroid enlargement decreasing, being on December 14th only twelve and a half inches. She died on December 29th, an hour after laryngotomy had been performed for the relief of dyspnœa. The *post mortem* examination showed the enlarged thyroid had compressed the trachea without actually obstructing the passage. The chief point of interest was the condition of the sympathetic ganglia of the neck. On the left side, the superior and middle ganglia presented nothing abnormal to the naked eye, but the inferior could not be found. In its place a nodule of an oval shape, but flattened on the side next the trachea, was present, and connected with the trachea by a dense fibro-cellular capsule, one-tenth of an inch thick. Internally there was a calcareous mass, chiefly consisting of carbonate of lime with an organic matrix. Microscopically, the ganglia exhibited their true nucleated and nucleolated cells as granular masses. The nerve-fibres were normal.

[The above case may be studied with advantage in connection with the treatment of Graves's disease by galvanism as suggested by the experiments of Wagner, Remak, Schiff, and Brown-Séquard nearly twenty years ago. Dr. Benedikt reports two successful cases in the *Gazette Hebdom.* for March 1865, and Dr. Ancona another in the *Gazette Médicale* of September 1877.—*Rep.*]

RICHARD NEALE, M.D.

CORNIL ON AMYLOID DEGENERATION OF LYMPHATIC GLANDS.—At a meeting of the Société de Biologie in Paris on March 2, M. Cornil presented some lymphatic glands taken from a young man who died from chronic arthritis of the hip-joint with suppuration, inflammation in the iliac fossa, phlebitis, etc. The crural and inguinal glands of the right

side were much enlarged; also the sacral, lumbar, and mesenteric glands. The liver, spleen, and kidneys showed amyloid degeneration. The ovoid form of the glands was preserved, and they were isolated from the surrounding inflamed tissues. On section, little islands of amyloid substance were observed in the cortical part along the course of certain arterioles and their capillaries. On examination with a low power under the microscope, the septa were seen to be thickened, the lymphatic sinuses large; some of the follicles in the cortical alveoli with amyloid substance, and others quite normal. The epithelial cells on the septa were somewhat swollen and granular; large scaly or spherical cells, with from two to six nuclei, filled the spaces bounded by the septa. The inference then is, that lymphatic glands when hypertrophied are attacked by chronic inflammation, similar to that of syphilitic and tubercular glands, involving their connective tissue and epithelial cells. The reticular tissue may also become amyloid.

VIEL ON THE SYMPTOMATOLOGY OF MENINGO-ENCEPHALITIS.—M. Viel, in his work on this subject,\* which has for object the study of the localisation of functions of the cerebral cortex, deals with it clinically and experimentally. In the clinical part, the author shows that general paralysis may be of use in this study, at least in its accessory phenomena, as apoplectic attacks, convulsions, more or less limited paralysis of motion, of sensibility, and of the senses; but in general the lesions are too widely spread and too complex for one to arrive at any definite conclusions. For this reason he has undertaken a series of experiments in which he reproduces at will very limited lesions of the grey matter by means of a needle charged with nitrate of silver. The following are some of his conclusions. The experimental inflammatory irritation, as practised by him, does not immediately produce any phenomenon; the various disorders which were demonstrated came on several days after the operation, and were clearly the result of the inflammatory irritation. When the inflammation attacks the posterior third of the cerebrum, it does not seem to produce any disturbance; but when the anterior two-thirds of the grey matter of the hemispheres are attacked, there are observed intellectual disorders, irregularity in the functions of the body, occasional convulsions, epileptiform or choreiform attacks, paralysis, and local disturbance of the sensibility and of the senses. Intellectual disorders coincide with a lesion of the anterior third of the grey matter of the convexity of the brain. Paralysis, convulsions, epileptiform, ataxic, and choreiform phenomena, disorders of the sensibility and of the senses, occur on the side opposite to the lesion, or are more marked on that side. Disorders of sensibility and of the senses have been particularly observed when the lesion occurred in the middle third of the superior and lateral aspect of the convexity of the brain. Motor disorders of the limbs appeared more especially in connection with the lesion of the "sigmoid gyrus". Rotation of the head is generally made in the direction of the lesion. The pupil is almost always contracted on the side opposite to the lesion, sometimes on both sides. Various disorders of nutrition may be observed, as considerable and rapid emaciation, lowering of the temperature, conjunctivi-

\* "Etude clinique et expérimentale sur les différences que peut présenter la symptomatologie de la méningo-encéphalite de la convexité du cerveau suivant le siège des lésions." Paris, 1878, A. Delahaye.



tis, keratitis, etc. They are generally most marked on the side opposite to the lesion.

**WELCH ON PULMONARY ŒDEMA.**—Under the direction of Cohnheim, a series of experiments have been made by Dr. Welch of New York (Virchow's *Archiv*, Band lxii) for the purpose of obtaining information with regard to the causes of œdema of the lungs.

After reviewing the various causes of œdema as given by Niemeyer and Hertz, he concludes that none of them are sufficiently explanatory. He sought to learn from experiment whether pulmonary œdema might arise from passive congestion, which was brought about by the ligature of several branches of the aorta. These experiments furnished a positive result, although such a degree of arterial obstruction became necessary for this purpose as could scarcely occur in man.

In the attempts at causing œdema by ligature of the pulmonary veins, it was found that all the veins from one lung might be tied and no œdema result. The lung became gorged with blood, but not œdematous. That œdema might arise, it was necessary to tie also the veins from the upper and middle lobes of the other lung.

Hence he concludes that the mechanical causes of œdema are much more severe than those occurring in the vast majority of cases of acute general dropsy of the lungs in man. It seemed probable that œdema might arise if a misproportion existed between the action of the two ventricles, in consequence of which the left ventricle should expel in a given time only a portion of the amount of blood which the right ventricle forced into the pulmonary artery, such as might arise from paralysis of the left ventricle. Such a paralysis was produced by compression of the walls of the ventricle, and pulmonary œdema followed. When the right ventricle was paralysed, no œdema ensued.

The immediate cause of pulmonary œdema is therefore considered to be a predominant weakness of the left ventricle. Favouring causes may be found in collateral hyperæmia of one lung when the other is hepatized, in passive congestion dependent upon mitral stenosis, and in hydræmia consequent to Bright's disease. But when these favouring causes are present the œdema does not always follow; another factor must also exist. If both sides of the heart become alike enfeebled during the death-agony there is no œdema, although this event takes place when the left side is more rapidly and more completely paralysed. The hypothetical nature of this explanation is fully recognised, and the possibility of its proof in the case of man is doubted.

**PONFICK ON THE CAUSE OF DEATH AFTER BURNS.**—In a communication read before the meeting of the Association of German Naturalists and Physicians (*Berliner Klin. Wochenschrift*, No. 46, 1877), Dr. Ponfick gave the results of a series of experiments made by himself and F. Schmidt with reference to the results of severe burns. The blood was found to be altered in all cases of severity, the red corpuscles separating into numerous small bits. These disappeared after a varying number of hours, with the seeming effect of exciting grave disturbance in several organs. A large portion of the apparently free hæmoglobin was eliminated through the kidneys, the parenchyma of which in the severe cases was evidently much inflamed, peculiarly coloured casts being found in the urine, while the tubules

were obstructed and the epithelium in a state of fatty degeneration. Another portion of the decomposed red corpuscles was taken up by the contractile cells of the spleen and bone-marrow, in which a gradual destruction was probably accomplished. The enlargement of these parts, their increased redness and moisture, appeared to indicate that the change mentioned was present.

Dr. Ponfick believes it probable that some of the rapidly fatal cases and some of the severe symptoms in cases of recovery result from the extensive and sudden destruction of red blood-corpuscles. The rapid suppression of urine, and a resulting uræmic poisoning, may also be of importance. From the evidence presented by these experiments, Ponfick recommends transfusion as a rational therapeutical measure in cases of severe burns.

**ARCHER ON A CONGENITAL BAND STRETCHING ACROSS THE ORIGIN OF THE AORTA.** Dr. R. S. Archer describes, in the *Dublin Journal of Medical Science* for May, a specimen procured by accident from a male aged 39.

Having slit up the aorta and left ventricle in the usual manner, Dr. Archer found a band extending across the aorta. This band was situated just above the line of insertion of the aortic valves, and when the vessel was closed must have flapped up and down in the blood-current, as it lay quite loose and slack when the cut surfaces were approximated. Arising by an expansion about half an inch wide, from that part of the aortic wall which lies just above the junction of the posterior and left lateral semilunar valves (its origin running in a diagonal direction from below, upwards, and backwards), it gradually became narrower till it reached its insertion at the junction of the posterior and right lateral cusp of the valve. Its direction thus represented a cord, dividing the circumferential area of the vessel into two unequal arcs, the anterior containing the right and left semilunar valves, and the posterior the posterior valve. It was apparently composed of exactly the same kind of tissue as the valves, which were in every respect normal and competent.

Dr. Archer has searched in anatomical and medical literature for an account of a similar abnormality, but without success. It appears to him, if this case is not quite unique, it certainly must be extremely rare. There was no opportunity of making a clinical observation of the heart's sounds over the aortic area. He has no doubt whatever that the band was congenital, as he cannot imagine any diseased state of the vessel producing it. The heart and aorta appeared in all other respects to be quite normal.

The band was, he thinks, doubtless developed together with the semilunar valves, and may be regarded as an irregular and supernumerary cusp.

**RAPPERT ON THE ABSORPTION OF FOREIGN BODIES BY THE LUNGS.**—Rappert (Virchow's *Archiv*, Band lxii) describes the results following the absorption of soot by the lungs. He endeavoured to eliminate some of the complications resulting from the methods adopted by other experimenters, especially by Slavjansky. His investigations were directed towards ascertaining the alterations produced in the epithelium of the air-passages as well as in the sub-epithelial tissues, when air containing particles of soot was inhaled. He also sought for the channels by which the soot-particles were received into the interstitial tissue, the force causing them to enter,

and the condition in which they were while entering, whether as free particles or inclosed within cells.

By causing the animals to inhale air laden with soot from an ordinary petroleum lamp from which the chimney was removed, he obviated the introduction of material capable of producing chemical changes. It was found that the particles were taken up in part by the alveolar epithelium and in part entered the tissue. The former gave rise to such alterations in the cells that a subsequent desquamation of them took place.

In general, the soot passed directly into the tissues, and only to a very limited extent by means of amoeboid cells. After it had entered the tissues, it was always found within certain portions of the lymphatic system. It could not be accurately determined through what channels this entrance took place, although it seemed most probable that such were present between the epithelial cells, and that the lymph-currents furnished the force by which the particles were carried along.

#### RECENT PAPERS.

Sarcomatous Tumour in the Spinal Canal. By Dr. Hünicke. (*Berliner Klinische Wochenschrift*, July 1.)  
On the Communication of the Ventricular Cavities of the Encephalon with the Subarachnoid Spaces. By Dr. Marc Sée. (*Revue Mensuelle de Médecine et de Chirurgie*, June 10.)

#### MEDICINE.

CLEMENT ON TREMOR FOLLOWING ACUTE DISEASES.—In a paper read before the Medical Society of Lyons, Dr. Clément calls attention to a series of cases in which an acute disease has been followed, either immediately, or after a short lapse of time only, by trembling of part or of the whole body. This tremor cannot be looked upon as due simply to the debilitated state in which the patient is left by a sharp attack of fever, for it is much more marked than tremor from such a cause, it is more or less rhythmical, and, in the great majority of cases, it is still present after the patient has recovered from the general effect of the fever. The author has recognised two types: in one of which, the tremor resembled that seen in paralysis agitans; and, in the other, it was comparable to the coarse trembling occurring on movement in disseminated sclerosis. The condition is one of great rarity, for the author, though on the look-out for cases of the kind, met with not more than three or four examples of it in eight years, and this, notwithstanding that he was at the head of a large hospital service, and that, during this period, several epidemics of small-pox and of typhoid fever had occurred. Fourteen cases are referred to in the paper, four of which are reported by the author, and the rest are gathered from various sources. In six cases, the trembling presented the characters of paralysis agitans, and, in the remaining eight, those of disseminated sclerosis. We subjoin an abstract of one of the cases observed by the author himself.

A soldier, aged 22 years, was admitted on the third day of typhoid fever. The fever ran a mild course, but, on the eighteenth day, on examining the patient, the hands were found in the typical scrivener's position seen in paralysis agitans, and the muscles were affected with well-marked tremors, just such as those which characterise that disease. There was, moreover, tremor of the feet and legs. When sitting up, the head was bent a little forwards, and was affected

with slight tremor, and the eyes looked fixedly to the front. The patient could not raise a glass half full of water to his lips without spilling some of the liquid. Speech was hesitating and slow; his answers to questions were short and monosyllabic. His muscular power was weakened, and sensibility was diminished in all the limbs; but pricking or tickling the sole of the foot brought on reflex spasm of the legs, in which the trembling became much more marked. The tremor stopped altogether during sleep. These phenomena persisted from the eighteenth to the thirtieth day of the disease, and then gradually diminished. At the end of seven weeks the patient was discharged nearly well.

In another case observed by the author, a male patient, aged 35, had suffered from an attack of typhoid fever eight months before, and since that time had always suffered from trembling. When first seen by the author, not only were all the symptoms noted in the present case present in considerable intensity, but there was exceedingly well-marked festination, so that, after walking with the body bent forward for a few steps, the patient broke into a run, and had a difficulty in saving himself from falling, or from running against a wall. In this case, however, there was nystagmus. The treatment adopted, consisted of cold douches and sulphur-baths, and at the end of three months the patient went out nearly well.

In the two other cases observed by Dr. Clément, the tremors were very violent, and were followed by epileptiform attacks. Both of these cases ended fatally; but, unfortunately, in neither case was a *post mortem* examination made.

In the second group of cases, in which the tremor was allied to that seen in disseminated sclerosis, the following were the principal symptoms; trembling in the execution of voluntary movement, speech drawling and clipped, ataxy, with a certain amount of psychical disturbance, such as change of disposition, tendency to cry or laugh, irritability of temper, etc.

In his remarks on these cases, Dr. Clément calls attention to the very close resemblance between the groups of symptoms above described and those seen in the chronic nervous disorders which have served him for types in his classification. He does not profess to know anything about the pathological anatomy of these states, but he excludes the idea of sclerosis, and he sums up by saying, very wisely, "I have no wish to attribute these symptoms, occurring after acute diseases, to the same anatomical substrata as we find in disseminated sclerosis, for, in the study of symptoms, the nature of the lesion has often only a secondary importance; especially is this true in the pathology of nervous disorders, where the symptoms depend much more upon the seat of the lesions than upon their nature. The alteration produced in the spinal cord by acute affections and in particular by small-pox, are transitory, and are evidently less profound and quite different from those present in disseminated sclerosis. But whatever may be their nature, they have the same seat and the same mode of distribution, since they produce the same symptoms." W. A. STURGE, M.D.

MESCHÉDE ON A CASE OF BILATERAL PARALYSIS OF THE DILATOR MUSCLES OF THE GLOTTIS (POSTERIOR CRICO-ARYTENOID): RECOVERY.—In the *Berliner Klinische Wochenschrift* for June 17th, Dr. Meschede of Königsberg gives the details of a case of paralysis affecting the dilator muscles of the glottis, of which the following is an abstract.



Paralytic affections of the larynx are now divided into two groups—vocal and respiratory. The muscles affected in the latter group are the posterior crico-arytenoid pair, which serve to open the glottis, and are in this respect opposed by the lateral crico-arytenoid pair. While cases belonging to the former group—the vocal—are not uncommon, those belonging to the latter group, especially those involving both posterior crico-arytenoids, have hitherto been exceedingly rare. Moreover, of the cases hitherto recorded, some appear to have been cases of only partial paralysis, while in others the diagnosis was scarcely conclusive. In the present case, the existence of complete paralysis of both posterior crico-arytenoid muscles was clearly established. The laryngoscopic conditions have been figured in Bürow's *Atlas of Laryngoscopy*, Table x, fig. 6. The patient was a girl aged 19, and was stated by her mother to have been unable to speak for the last two months; there was some bloody expectoration, but no signs of lung-disease could be made out; deglutition, though at times somewhat slow, was not impeded. The prominent affection was the difficulty of respiration. When the breathing was undisturbed, it was noisy and somewhat laborious, inspiration being specially difficult. But on the least exertion there was great dyspnoea, and each inspiration was accompanied by a loud howling sound. Respiration generally was retarded, the pulse small and quick. Menstruation, which had always been irregular, had ceased for several months. Examination with the laryngoscope was exceedingly difficult, being rendered still more so by impeded and diminished mobility of the tongue. When examined while respiration was calm, the vocal cords remained stationary, the glottis not expanding with inspiration. But when respiration became accelerated from agitation or any other cause, the condition of the vocal cords became reversed: they became closely approximated during inspiration, instead of separating, so as to come almost into contact. At the same time they were not tense, and it was seen that they were drawn downwards and together by the current of inspired air. That this was not a case of spasm of the glottis was evident, seeing the dyspnoea did not occur in paroxysms, but every time that respiration was in any way accelerated, when also the vocal cords became immediately approximated; moreover, the dyspnoea was of too long duration. Had this condition of the larynx not been observed, the case might have been regarded as one of hysterical simulation; but paralysis of the dilators of the glottis can never be simulated. Nevertheless, it was interesting to note the effect of an audibly threatened use of the actual cautery if the patient did not speak by a certain time; for, some little time before the appointed day, she began to articulate somewhat imperfectly, while on the actual day, and within sight of the heated cautery, speech became almost natural; showing how undefined may become the boundary line between hysteria and simulation. No real improvement was, however, attained, and the dyspnoea became so great as to suggest at times the idea of tracheotomy. For the first six days after her admission to the hospital, the treatment consisted entirely of local faradisation, without the slightest benefit, and of warm baths and cold affusion, with the result that on the eighth day menstruation became re-established. A regular treatment, consisting of systematic subcutaneous injection of strychnia, was now commenced, the salt employed being the soluble sulphate, in a one per cent. solution. The

amount injected was at first small (.015 grain), and produced no results; thus showing incidentally that the later beneficial results were due not to the mechanical and psychical effects of the punctures, but to the larger quantities injected. The amount of strychnine sulphate was now gradually increased up to .07 grain, and this increase was from the first attended with marked improvement. At first, the injections, which were given morning and evening, were followed by sound sleep and increased freedom of respiration, which latter was of short duration at first, but gradually became more established, until, after the injection had been employed nineteen times, breathing remained and continued entirely free. After a period of four months, there was a slight relapse, which readily yielded to the same treatment.

#### BOEGEHOLD ON A CASE OF FATTY EFFUSION INTO THE PLEURA (HYDROPS ADIPOSUS PLEURÆ).

—The following unusual case is communicated by Dr. Boegehold of Berlin to the *Berliner Klinische Wochenschrift* for 17th June. The patient, a man aged 43, was admitted on the 16th January last into the Bethany Hospital, suffering from dyspnoea without pain, and very much reduced in condition. In the previous September, he had vomiting, pain in the stomach, constipation, etc., which lasted for upwards of two months. The patient presented now a cachectic appearance, pale flabby skin and mucous membranes, with the axillary and inguinal glands enlarged, many to the size of a walnut; there was extensive effusion into the left pleura, with the usual signs, arching of the thorax, obliteration of the intercostal spaces, dullness, etc. The heart was also displaced upwards and to the right. On the following day, the effusion had increased considerably. A puncture was therefore made in the fifth intercostal space, and a *litre* (about a pint and three-quarters) of fluid withdrawn, which was alkaline, opaque, dark yellow, and inodorous, with a specific gravity of 1023. On standing for about half-an-hour, there formed on the surface of this fluid a thin, yellowish, creamy layer, which also collected on the sides of the glass. Examined with the microscope, these were found to consist of fatty granules, intermixed with larger fat-globules and some large nucleated cells. On agitating the fluid with ether, this assumed a yellow colour, and there remained after evaporation an oily residue. The patient now experienced great relief; but, after a few days, the fluid collected again and had to be again removed, when two litres of a dark brown alkaline fluid mixed with blood were evacuated. About a week afterwards, the fluid had to be withdrawn for the third time; after which, on the next day, the patient died. At the subsequent necropsy, the left pleural cavity was found to contain two litres of reddish-brown fluid; the right one was empty. The left lung was reduced to one-third its size; its pleural covering greyish, somewhat thickened, and covered with minute reddish-grey points; the left costal pleura was thickened, much discoloured, and dotted with grey or yellow prominences of various sizes from a pea to a shilling, the apices of which were flat and ulcerated. The right lung was much enlarged, nowhere adherent; while the right pleura, costal as well as pulmonary, was dotted with the same elevations of various sizes as the left, which, however, were nowhere ulcerated. The stomach presented about its middle a constriction admitting only two fingers; on its posterior wall there was a funnel-shaped depression, at the

bottom of which was a ragged ulcer of the size of a sixpenny-piece, with hard edges. This portion of the gastric wall formed, with the pancreas and the surrounding mesentery, a hard solid tumour as large as an apple, which presented a yellowish-white surface on section. In the immediate vicinity of the common duct existed several hard tumours as large as hazel-nuts, and presenting the same appearance on section; while several of the mesenteric glands showed a similar condition. Examination of these growths with the microscope showed the usual appearances of carcinoma. In several places, near the pleura and the lymphatic glands, the large cells contained oil-globules. In the gastric tumour, the cells had almost wholly undergone fatty degeneration, and were imbedded in an abundant stroma. We must, therefore, look upon the tumour of the stomach, the cells of which had undergone the greatest degeneration, as the primary affection, which gave rise to further morbid processes in the surrounding tissues. The ulcerations on the pleura were found to consist mainly of granular matter and large cells containing fatty globules; and the fatty granules collected on the pleural fluid must therefore be regarded as the *débris* of broken-down cancer-cells which had undergone fatty degeneration. A similar case is described by Quincke (*Archiv für Klinische Medizin*, vol. xvi, p. 121) of carcinoma in the peritoneum, with dropsical effusion containing large quantities of fatty matter.

**MOSLER ON THE LOCAL TREATMENT OF MENINGEAL AFFECTIONS IN ACUTE ARTICULAR RHEUMATISM.**—In a paper read before the Medical Society of Greifswald (*Deutsche Medicinische Wochenschrift*, June 8th), Dr. Mosler says that four years ago Schüller made some experiments to determine whether the acknowledged influence of certain external applications on the cerebral circulation could be demonstrated in the vessels of the pia mater (*Berliner Klinische Wochenschrift*, No. 25, 1874). Sinapisms were in the first instance applied to the skin, the result showing that by a long-continued application thereof it was possible to diminish the blood-contents of the cerebrum. The following observations now show that, in certain cases of cerebral pressure by effusion or congestion, the best results may be expected when the application is made directly on the scalp; that is, in the closest possible proximity to the affected organ and over the greatest possible area. The value of counterirritants and vesicatories in cerebral inflammation, etc., has been long recognised. But their use is also attended by the best results in affections of the cerebral membranes. The patient in the present case was a young man twenty-five years of age, who was seized with acute articular rheumatism, which ran its usual course, without heart or lung complications, attacking most of the large joints in succession. Early in the case, however, there were symptoms of cerebral congestion, which were relieved by blisters to the feet and a moderate bleeding. Subsequently, cerebral symptoms again set in, in the form of furious delirium, passing into coma, with unequal pupils, retarded pulse, and continuous high temperature (102°-104.5° F.). The treatment, consisting of warm baths and cold affusion, tincture of eucalyptus, cathartics, etc., was of no avail. The head was now shaved, and a fly-blisters, of the size of a hand, was applied to the scalp, while behind each ear another blister, of the size of a half-crown, was placed. The following day there was marked improvement in the pa-

tient's condition, with return of consciousness and decline of temperature. The case now progressed favourably, and ended in perfect recovery. The liability of acute rheumatism to grave cerebral or cerebro-spinal complications was long known, and noticed by Boerhaave, Sydenham, Van Swieten, and others; while other observers (Todd, Lebert, Trousseau, etc.) have demonstrated a tendency in acute rheumatism to involve other portions of the nervous system. And, as we know the endocardium, pleura, etc., to be liable to rheumatic inflammation, we are justified in assuming the same with regard to the serous membrane of the brain. As to the action of cantharides-blisters on the circulation in the pia mater, an experiment on the brain of a rabbit showed that the application of a blister to the nape of the neck, and even the back, was followed first by dilatation of the arteries of the pia mater, then by alternate dilatation and contraction, passing finally into a continuously contracted state, so that even amylnitrite was unable to produce dilatation.

W. J. TREUTLER, M.B.

**EISENLOHR ON LEUCOCYTHÆMIA WITH PARALYSIS OF CEREBRAL NERVES.**—A case of splenic, lymphatic, and medullary leucocythæmia, with multiple paralyses of the cerebral nerves, is described by Dr. C. Eisenlohr of Hamburg (Virchow's *Archiv*, Band lxxiii, Heft i). The interest in this case centres in the occurrence, in the course of the disease, of complete bilateral facial paralysis, accompanied by interference with common and special sensibility. Electrical exploration gave the reactions of peripheral paralysis. *Post mortem* examination revealed the causes of these symptoms to be numerous hæmorrhages into the substance of the nerves themselves, the cerebral centres being quite free.

R. SAUNDBY, M.D.

**IS CONSUMPTION CONTAGIOUS?**—This very important question is once again brought prominently forward in an editorial article in the *Lancet*, June 1878, p. 844. From the time of Aristotle to the present, various medical writers have urged that phthisis may be propagated from one individual to another through the medium of a material cause. Although the supporters of this doctrine have been in the minority, yet they include amongst them many celebrities of our profession. In Dr. Morton's *Treatise of Consumption*, 1694, and Dr. T. Young's *Practical and Historical Treatise on Consumptive Diseases*, 1815, these opinions are set forth with great force and vigour. The contagiousness of phthisis is, and has been, very generally held in Southern Europe, and doubted, as a rule, and especially during the last century, in North Germany and Great Britain, whilst French authorities have been much divided on the question. Dr. Walshe, in 1860, considered the influence of contagion anything but proven; but, in 1871, he had considerably modified his views, for he said, "my belief in the reality of such transmissibility has of late years strengthened. I have now met with so many examples of the kind that coincidence becomes itself an explanation difficult of acceptance". As a matter of practice, we think that it cannot be too strongly enforced, that it is a very dangerous proceeding to regularly share the bed of a phthisical patient, and to be habitually in close contact with, and attendance on, such a person.

[Dr. Wm. Budd of Clifton published in the *Lancet*, vol. ii, 1867, p. 452, his very strong convictions that phthisis was essentially contagious; these convictions



having forced themselves upon him during the previous ten years, during which period he had most carefully studied the subject in all its bearings. The following are the principal conclusions at which Dr. Budd had arrived. 1. Tubercle is a true zymotic disease, of specific nature in the same sense as typhoid, typhus, and scarlet fevers, syphilis, etc. 2. Like these diseases, tubercle never originates spontaneously, but is perpetuated solely by the laws of continuous succession. 3. The tuberculous matter itself is (or includes) the specific morbid matter of the disease, and constitutes the material by which phthisis is propagated from one person to another, and disseminated through society. 4. The deposits of this matter are of the nature of an eruption, and bear the same relation to the disease, phthisis, as the "yellow matter" of typhoid, for instance, bears to typhoid fever. 5. By the destruction of this matter on its issue from the body by means of proper chemicals or otherwise—seconded by good sanitary conditions—there is reason to hope we may, eventually, and possibly at no very distant time, rid ourselves entirely of this fatal scourge. In the paper alluded to, Dr. Budd further reviews the grounds upon which the above conclusions were founded, and concludes with an earnest appeal that they may not lightly be passed by.

Dr. Richard Payne Cotton, in reply, briefly sums up his own conclusions upon the subject, which are directly opposed to those formed by Dr. Budd (*vide* p. 550). "1. I believe phthisis to be a purely constitutional disease, which may be either inherited or acquired, but which is incapable of being communicated by one person to another in the ordinary sense of a contagious disease. 2. I regard tubercle as the product of such constitutional disease. 3. I consider that a person may be constitutionally phthisical before tubercles are deposited in the lung or any other organ. 4. Although tubercle may be inoculable, I do not believe it can be 'disseminated through society' by the ordinary principle of contagion".

To prove the non-contagious character of phthisis, Dr. Cotton adduces the statistics of the Brompton Hospital from its commencement in 1846 to 1867. During that period, 15,262 in-patients and 102,369 out-patients had been under treatment. Of 59 resident medical officers, 49 were named in the *Directory*, and others were known to be abroad. The chaplain had served 17 years, and the two previous ones were living. The matron had been resident 16 years, and her two predecessors were well; indeed, without entering here further into details, the statistics show that those engaged in duties for long periods, in what, according to Dr. Budd, could be nothing less than a pest-house, were not exceptionally liable to the disease.

Those who wish to consult the various able papers scattered through the periodicals during the last twenty years upon this subject, may glean much information by the aid of the *Medical Digest*, section 681-5.—*Rep.*]

GIBBONS ON GANGRENE OF THE LUNG FOLLOWING TRACHEOTOMY FOR DIPHTHERIA.—Dr. R. A. Gibbons (*Lancet*, May 1878, p. 754) gives the notes of a case of a child, aged 5½, admitted to the Children's Hospital on the third day of illness, requiring immediate tracheotomy. On the seventh day, the tube was removed, the child breathing well through mouth and nose. Temperature: morning 100.6°; evening 102.6°; pulse 126; respiration 25. For the next three days, her progress was satisfactory, but

now the temperature rose, ranging from 98.6° to 104.2°, and the sputa became abundant and gangrenous in odour, and she died the sixteenth day after the operation.

The *post mortem* examination revealed a gangrenous condition of the anterior portion of the rings of the trachea for an inch and a half below the wound; the trachea and bronchi being intensely congested. In the left lung, the bronchi were full of pus; sections of the lung had a very offensive smell. In the right lung, there was a cavity in the upper lobe full of offensive pus.

It appeared that the end of the tube set up irritation of the trachea, leading to inflammation and suffocation, terminating in gangrene. There were no signs of the tracheotomy-tube having caused pressure on the posterior walls of the trachea.

ORD ON MYXŒDEMA.—In a clinical lecture (*British Medical Journal*, May 1878, p. 671), Dr. W. Ord gives the history of two cases, to which he applies the name "myxœdema", using it as an expression of the physical condition believed to be the true cause of the symptoms, and denoting the basis of the appearances, to which the term "cretinoid" is perfectly fitted. The cases agreed in all respects with those described by Sir W. Gull as "cretinoid". Two female adults, after twenty years of age, gradually developed the following symptoms. The features and hands became swollen, the latter "spade-like". The skin all over the body was swollen, and singularly dry and hard to touch; there was no pitting. The expression was placid. The lips were thick, expressionless, the articulation slow, the voice monotonous and harsh, like a patient suffering from tonsillitis, due to the swollen condition of internal parts. All muscular acts were performed slowly; they were liable to fall during walking, through a want of harmony between the flexors and extensors. Both patients were well nourished, and the mental powers, although slow, were well performed. They wrote well but slowly; their memories were good, and they were painfully aware of their slowness. Sensation was perfect; response, however, was slow. The urine was healthy. Temperature about 98°. Both were married, and had borne children. The viscera were healthy. The arteries were hard and tense, and the second sound of the heart was accentuated.

In a *post mortem* examination of a case identical with those related, Dr. Ord found the mucin of the myxœdematous skin immensely increased, forming a pad around and in the touch-corpuscles. This accounted for the torpor and slow perception, so marked in these cases.

All the cases that have fallen under Dr. Ord's notice have been women of adult ages, married and unmarried. In none was there any known taint of syphilis, nor was there any history of intemperance. All shared the state of skin and characteristic facial expression, with absence of albuminuria, the slowness of perception, thought, and action, particularly of speech. In all, the affection was general and progressive. The thyroid gland, as in many cases of idiocy and of cretinoid idiocy, was absent in Dr. Ord's cases.

SIMS ON CHOLECYSTOTOMY IN DROPSY OF THE GALL-BLADDER.—Since Mr. Maunder recommended this operation in cases of impacted gall-stones (*Lancet*, vol. ii, 1876, p. 640), at a meeting of the Clinical Society, when the feasibility of such a pro-

cedure was discussed in relation to a case that had been under Dr. Daly's care, no operator has been found bold enough to carry out the suggestion until last April, when Dr. J. M. Sims (*British Medical Journal*, June 1878, p. 811) operated upon an American lady, aged 45, with great enlargement of the gall-bladder, from which nearly thirty ounces of fluid was removed, together with sixty gall-stones.

The operation lasted one hour and sixteen minutes. The most tedious part was securing the cyst in the incision and closing up the wound. She lived eight days. The operation was conducted under Lister's process. A *post mortem* examination revealed no trace of peritonitis, the gall-bladder was firmly adherent to the abdominal walls, and contained sixteen gall-stones which, being sacculated, had prevented them from being removed during life. Although the case terminated fatally, from the poisonous effects of absorbed biliary salts, still Dr. Sims regards it as a triumph for Listerism; and the immediate benefit of the operation was shown in the relief of pain, itching, nausea, vomiting, and in the production of natural stools.

The fluid contained in the distended gall-bladder, was proved, by analysis, not to be either bile or altered bile, but a sero-mucous liquid, secreted by the mucous glands and epithelial covering.

BELL AND HICKINBOTHAM ON THE RELATIONSHIP OF PUERPERAL FEVER AND SCARLATINA.—Mr. Chas. E. W. Bell (*Lancet*, May 1878, p. 775) relates his experience during an epidemic of scarlet fever in Exeter during the last year. Mr. Bell is one of the medical officers of the Public Dispensary, and in many houses where he attended children with the fever, their mothers were on the eve of their confinements. Both midwives and mothers laughed at the advice given, to be careful and to be secluded from the fever patients; indeed, this was in most cases practically impossible, and the practitioner went, with fear and trembling, from the scarlatinal to the lying-in bed. Mr. Bell took great pains to ascertain the mortality during the months, ranging from March to October, amongst lying-in women, and could find only two deaths, one returned as "septicæmia", and the other as "flooding".

Dr. James Hickinbotham (*Lancet*, p. 815) states, "I have known" (in Birmingham) "women delivered upon, and remaining through convalescence in, a bed just vacated by a case of malignant scarlatina. I have known, more than once, a mother, immediately after labour, receive back into her arms a child or children in some stage of the disease, and yet in only one instance, and that twelve years ago, have I seen evil results accrue." Dr. Hickinbotham is irresistibly led to the conclusion that there exists no special relation between one disease and the other, and that puerperal women are not exceptionally liable to be attacked by scarlatina; a view not shared in by many observers.

RICHARD NEALE, M.D.

DIEULAFOY ON AUDITORY DISORDERS IN BRIGHT'S DISEASE.—M. Dieulafoy has just published several observations in the *Gazette Hebdomadaire (Journal des Connaissances Médicales)*, from which he thinks that the auditory disorders accompanying the different forms of Bright's disease, far from being rare, ought to be considered as symptoms in the same degree as the ocular disorders which are frequently met with in this malady. These auditory disorders are not always the same: most frequently they consist of a humming sound in one or both

ears: generally these sounds are accompanied or followed by semi-deafness. Now and then the deafness comes on without previous noises; it may be transitory and recurrent, or rarely complete; it may be localised in one or both ears, and disappears or remains permanent, according to the case. Lastly, these various auditory disorders may be painless, or may be accompanied by acute pain in the face or ears. One patient, who had suffered from tinnitus aurium for twelve or fifteen months, was examined by M. Ladreit de Lacharrière, who found permanent lesions of the tympanum, viz., an abnormal vascularity at the level of the handle of the malleus on the right side, and thickening with depression of the left membrana tympani, which no longer reflected rays of light. In thirty-seven cases which were observed, auditory disorders were demonstrated fifteen times. 1. It is difficult to decide whether these disorders are more especially allied to any one of the forms of Bright's disease; they exist in all forms of nephritis, chronic or acute. 2. Auditory disorders occur at all stages of nephritis; eleven times out of fifteen they appeared to be contemporary with the œdema, or with the increase of the œdema. 3. Their intensity is very variable; several times they have coincided with a painful stage, facial neuralgia, or deep seated pains in the ear; several times, also, they have appeared on the same side as the facial œdema, or at least on the side where œdema was greatest. 4. As to whether one ought to assign them to lesions of the ear or of the auditory nerve, this is a point to be determined as observations become more numerous; one sees now a rent in the tympanic membrane, now an abnormal vascularity, and so on. 5. With regard to their diagnostic value, these disorders may prove to be of great assistance; they often complete the *tableau* of the disease; in some cases they precede the other symptoms; and sometimes they may put one on the track in a difficult diagnosis, as in certain obscure forms of Bright's disease, in which nephritis neither reveals itself by œdema, nor by any other apparent sign.

LÉGER ON ACUTE AORTITIS.—Dr. Léger, in a work on this subject (*Gazette Médicale de Paris*, May 25th, 1878), gives a complete sketch of the characteristic features of this disease. In the chapter on pathological anatomy, he says that the lesions may extend as far as the iliac arteries, but are most marked in the ascending part of the arch of the aorta. The walls are thickened and present ecchymoses and soft grayish patches. The inflammation may spread to the serous membrane surrounding the origin of the aorta, and may cause pericarditis and neuritis of the cardiac plexus. Microscopic examination shows that the soft patches are composed of masses of fusiform embryonic cells, being circumscribed in the internal coat and diffused in the two others. Dilatation of the arterial wall occurs at the diseased spot, and is followed by aortic insufficiency and cardiac hypertrophy.

The chief exciting cause of the acute inflammation is atheroma. Among the predisposing causes are gout, alcoholism, fatigue, cold, and external injuries. Rheumatic endocarditis may cause it by continuity of tissue; it may appear in fevers or in purulent infection. The symptoms which are most prominent are the earthy appearance of the patient, attacks of oppression with præcordial pain, special disorders of the heart and arteries, occasional sudden death during angina pectoris; usually there is no feverishness. The pain varies from a mere sense



of weight to a feeling of laceration and retro-sternal burning. The pulse is exaggerated by cardiac hypertrophy, or small in consequence of dilatation at the origin of the subclavians. The heart is generally hypertrophied: there is a murmur with the first sound (dilatation of the arch) or with the second (aortic insufficiency). The complications which are most frequent are pericarditis, pulmonary oppression, inequality of the pupils, delirium, etc. The usual termination is death; in bad cases, it occurs after several attacks of angina pectoris, or it may happen during syncope. In other cases, the attacks come on at long intervals, and the patient dies from cachexia. The duration varies from several days to three or four months. The diagnosis is based on the character of the pain, and the constant presence of pericarditis. It is difficult when mitral insufficiency or aneurism of the aorta coexist. Angina pectoris without aortic lesion is less serious; sometimes it cannot be distinguished from aortitis. The prognosis is grave, although recovery is not rare; it depends on the preceding health and on the complications. As to treatment: for the pain, ice, narcotics, and antispasmodics may be given; for the heart-symptoms, digitalis, milk diet, etc. The iodide of potassium has appeared to be of some use.

#### RECENT PAPERS.

- A Case of Hydatid of the Liver bursting into the Air-passage: Recovery. By Dr. L. Katz. (*Berliner Klinische Wochenschrift*, June 24.)  
 On Vaso-motor Epilepsy. By Dr. Binswanger. (*Ibid.*, July 1 and 8.)  
 The Prevention of Pitting on the Face after Small-pox. By Dr. E. Schwimmer. (*Wiener Medicin. Wochenschrift*, June 22 and 29.)  
 Cases bearing on the Question of the Existence of Motor Centres in the Cortical Substance of the Brain. By Dr. C. Morelli. (*Lo Sperimentale*, June.)  
 Researches on Interstitial Cardiac Nephritis or Cardiac Kidney. By Dr. P. Cuffer. (*La France Médicale*, June 22.)  
 Note on a Case of Double Pneumo-thorax. By Dr. Duguet. (*La France Médicale*, June 19.)  
 Phthisis and its Treatment in the Paris Hospitals. By M. I. Grancher. (*Gazette Médicale de Paris*, June 22.)

#### SURGERY.

AUFRECHT ON A CASE OF LOOSE CARTILAGE BECOMING ADHERENT AFTER VENOUS THROMBOSIS WITH PULMONARY EMBOLISM.—Dr. Aufrecht of Magdeburg reports the following case in the *Deutsche Medicinische Wochenschrift* for June 8. T., a butcher, aged 38, suddenly felt a sharp pain in the right knee-joint on the 18th September 1877, so that he was unable to stand. On examination, the presence of a movable cartilage about the size of a bean, which appeared now on the outer and then on the inner side of a joint, was made out. Its removal was advised, but was deferred for a few days at the patient's request. On the 22nd September the cartilage was again caught between the articular surfaces of the joint, and this time caused intense pain, leaving the joint very tender, so that subcutaneous injections of morphia became necessary, and a somewhat febrile condition with increased temperature (101.3 F.) continued for two days. The cartilage could be felt now as a small prominence on the inner side of the patella. The joint remained stiff and tender for eight days. Suddenly, on the 3rd October, there came on sharp shooting pains in the right side with hæmoptysis, about two teaspoonfuls of blood being coughed up. This pain continued for some days, and was accompanied by cough and

moderate hæmoptysis, and there was a patch of dullness about the size of a crown-piece, with a strongly pronounced friction-sound on the right side posteriorly near the fifth rib. Under repeated injections of morphia and application of sinapisms, these symptoms gradually gave way. On the 8th of October there was œdema of the right foot; the knee-joint was free from pain, but stiff, owing to the prominence near the patella. On the 14th there was renewed hæmoptysis with cough, but no pain in the chest, and no lung-disease of any kind could be made out. The patient, however, felt weak, and had to keep his bed for a fortnight. The œdema of the right foot and leg continued for some time, and subsided only very gradually. There was no pain or tenderness of the joint now, but the prominence near the patella continued immovable in the same place, and was still fixed there last month (May). There can, therefore, be no doubt that the cartilage first excited by its presence a certain degree of inflammatory action in the knee-joint, in consequence of which it became itself adherent. The concomitant chest-symptoms form a point of some interest. The sudden accession of pain and hæmoptysis, the circumscribed dullness and friction-sound, occurring in a man hitherto in perfect health, all indicated pulmonary embolism; but that this emanated from the affected limb was only confirmed when œdema of the right foot set in on the fifth day after the occurrence of the chest symptoms. The clot or thrombus had probably originated in one of the veins about the affected knee-joint.

W. J. TREUTLER, M.B.

BIGELOW ON DISLOCATION OF THE HIP, AND ITS TREATMENT BY FLEXION.—Dr. Henry J. Bigelow (*Lancet*, June 1878, page 860) believes that the simplicity of the principle which controls hip-reduction is as yet scarcely appreciated by the majority of practitioners into whose hands the scattered cases fall.

If there be any single and best rule for reducing a recent dislocation of the hip, it is to get the head of the femur directly below the socket by flexing the thigh at about a right angle, and then to lift or jerk it forcibly up into its place. This rule applies to all dislocations, except the pubic, and even to that when secondary from below the socket. This "flexion method" supersedes all other methods of hip-reduction, and is usually instantaneous in its results.

If, however, after one or two trials, the hip cannot be jerked into place, then let the rent in the capsule be enlarged by moving the flexed thigh from one side to the other, so as to sweep the head of the femur across below the socket. No harm results from enlarging the capsular rent; indeed, this often occurs with advantage, without the knowledge of the surgeon, during unsuccessful efforts to reduce the bone, especially in executing the manœuvre described in the rule, "Flex, abduct, evert." Flexion is the essence of this rule, and the femur is rotated around the ilio-femoral ligament as a centre. When the knee, abducted by this rotation, descends on the outside, the head of the femur rises on the inside, and is thus brought into its place, the shaft of the bone acting as a lever, with the outer band of the ligament as a fulcrum.

Abduction sometimes succeeds at once, but not always, especially if there be much laceration of the capsule. Then the head of the bone will not rise, and the upward lift becomes absolutely essential.

Why flex the thigh? Because it relaxes the ilio-femoral ligament.

DAVY ON A NEW METHOD OF COMPRESSING THE COMMON ILIAC DURING AMPUTATION AT THE HIP-JOINT.—Mr. Richard Davy, in the *British Medical Journal*, May 1878, p. 704, illustrates, by means of a diagram, the facility by which the internal iliac artery may be controlled by the aid of a wooden lever, *per rectum*; a procedure far easier and more reliable than compression of the abdominal aorta, and one that disturbs the circulation less, seeing that the sound leg remains unaffected. A straight lever of wood is introduced into the rectum; the smooth end is applied over the common iliac of the side operated upon, between the bodies of the lumbar vertebrae and the psoas magnus muscle, the projecting part running nearly parallel with the opposite thigh. With the assistance of Mr. Bond, Mr. Davy removed the right extremity of a lad, aged nine, by this means, losing only a teaspoonful of blood.

CROFT ON PLASTER-OF-PARIS SPLINTS FOR FRACTURES OF THE LEG.—Mr. Croft, in a clinical lecture (*Lancet*, June 1878, p. 819), describes a simple, inexpensive, and readily made splint, used by himself for the last two years. Each splint is constructed of two layers of flannel, the outer layer carrying the gypsum, the inner layer forming a dry, warm, elastic lining, so protecting the skin. These splints are applied by means of muslin bandages. The splint having been applied before having hardened, traction is maintained until the plaster has set, which takes place in three to five minutes. Care is to be taken that the inside and outside pieces of the splint do not meet either down the front or at the back by at least half an inch.

As the swelling of the limb lessens, an additional bandage should be applied. At the end of ten days the outside bandage may be removed, and a fresh gummed bandage substituted, which will last so long as splints are needed.

These splints are characterised by their simplicity, stability, and economy, and therefore commend themselves strongly to the country practitioner. Instead of wooden or metallic splints, which may or may not fit, the surgeon can take out with him, to his case, a bag of plaster of Paris, and the muslin bandages, and perhaps the flannel, and he has all that is required for use.

KING ON A CASE OF DISTAL LIGATURE OF THE CAROTID AND SUBCLAVIAN ARTERIES FOR ANEURISM OF THE INNOMINATE AND AORTA.—In the *Lancet*, June 1878, p. 823, Dr. Kelburne King gives the history of a case where this operation was successfully performed, and in which death, due to the patient's intemperate habits, one hundred and eleven days subsequently, afforded an opportunity of examining the parts. Besides the aneurism of the innominate, there was found a large thoracic aneurism extending nearly to the termination of the thoracic aorta, consisting mainly of dilatation of the coats, but adhering firmly to the bodies of the dorsal vertebrae, of which the sixth and seventh were denuded of their periosteum, and formed part of the sac. The whole of the innominate was in an aneurismal condition, and its interior was occupied by a firm fibrinous clot, which extended as far as the ligatures on the carotid and subclavian arteries.

[A résumé of the condition found in Mr. Barwell's well-known case, at page 844 of the same number of the *Lancet*, in which the patient, by negligence, also

came to an untimely end, forms an instructive commentary to Mr. King's case.—*Rep.*]

HENRY ON A BLOODLESS METHOD OF PERFORMING TRACHEOTOMY.—Dr. Louis Henry (*British Medical Journal*, May 1878, p. 752) describes M. Bose's plan of performing "Tracheotomia superior", an almost bloodless operation, generally practised throughout Germany, and very often in England. As soon as the patient is chloroformed, a roller is thrust under the neck, bringing the important parts into prominence. A vertical median incision is made, beginning a small finger's breadth from above the upper margin of the cricoid, extending one and a half to two inches downwards. The cricoid cartilage being exposed, a transverse incision, not quite half an inch in length, is made as near its upper margin as possible, dividing the fascia that connects the thyroid gland with the trachea. The lower margin of the transversely divided fascia is seized with pincettes and peeled off the trachea by means of a blunt hook or handle of scalpel, together with all those veins which, if divided, give much trouble. By this means the isthmus of the thyroid is loosened, and the upper tracheal rings laid bare and easily opened.

WILLIAMS ON ACCIDENTAL REMOVAL OF AN ENLARGED MIDDLE LOBE OF THE PROSTATE DURING LITHOTOMY.—In the *British Medical Journal*, June 1878, p. 857, Mr. Charles Williams records an instance where the removal of a large portion of the middle lobe of the prostate, in a man aged 72, was attended with the best results.

[In 1851 Dr. S. W. Gross, professor of Surgery in Louisville, wrote as follows regarding the feasibility of removing portions of the enlarged prostate. "Excision of the prostate has been recommended. .... The idea of extirpating the whole gland is, indeed, too absurd to be seriously entertained. .... Excision of the middle lobe would be less objectionable. .... I should not expect much difficulty in the execution."

Sir W. Fergusson (*Medical Times and Gazette*, April 1857, pp. 385, 512), during lithotomy, in a man aged 65, found a large middle lobe, which he amputated; and, although the patient died ten days afterwards, there were no signs that could attribute the fatal issue to the removal of the prostatic lobe. The man died from asthenia. During the course of some observations upon the propriety of removing enlarged third lobes during lithotomy, Sir W. Fergusson brings forward several other cases where he has adopted this practice with advantage (*Lancet*, vol. i, 1870, p. 1). Mr. Cadge and Dr. Keith (*Medical Times and Gazette*, vol. i, 1862, p. 572) record many cases where portions of the prostate were removed accidentally during lithotomy.

Mr. Bryant, at a meeting of the Pathological Society, Feb. 5, 1878, showed two specimens of prostatic tumours successfully removed from men aged sixty-seven and seventy years respectively.—*Rep.*]

PEPPER ON A CASE OF SCIRRHOUS CANCER OF THE MALE BREAST.—Another of these comparatively rare cases is reported by Mr. A. J. Pepper in the *Lancet* (May 1878, p. 754). The tumour was removed by Mr. Heath, and two months afterwards the patient appeared to be going on favourably.

[Mr. Wagstaffe, in the *Transactions of the Pathological Society*, vol. xxvii, gives an interesting analysis of 71 cases, ten of which had been previously unpub-



lished. The youngest patient was 25 years of age, the oldest 84. In eleven cases it had existed under one year, in eight rather more than a year; in one over three years; in five over five years, and in two as long as eight years. In twenty out of twenty-three cases operated upon, the result was satisfactory. One case died nine years subsequently without any evidence of a return of the disease. Dr. Warren, in his work on *Tumours*, quotes a case of a scirrhus mass, removed by himself from the breast of a gentleman 30 years of age, who, eleven years subsequently, was in perfect health.—*Rep.*]

HAMILL ON AVULSION OF ONE OF THE MUSCLES OF THE EYEBALL.—Dr. J. W. Hamill reports, in the *British Medical Journal*, June 1878, p. 894, an accident unique in character.

One of the rests for supporting the glass globe of an ordinary gas-bracket pierced the conjunctiva of a young girl, and by its hooked extremity, tore away a muscle from its attachment to the bone, the belly of the muscle hanging down on the cheek; its insertion into the globe being intact. The protruding portion was cut as short as possible, and simply dressed. The patient not returning, it could not be decided whether the injured muscle was the external rectus or inferior oblique, but Dr. Hamill believed it was the latter.

R. NEALE, M.D.

ELLIS ON OSTEOMALACIA IN A MAN.—In the *Boston Medical and Surgical Journal* for January 3, Dr. Calvin Ellis relates a case of osteomalacia occurring in a man. The subject was a carpenter, aged 50. Having previously enjoyed good health, he was seized while in California, in December 1871, with what he called pneumonia, but in which there was neither cough nor expectoration. After some weeks he became better, but not sufficiently to do any work or to walk beyond short distances. In May 1872 he started for Boston by steamer. On the fourth morning, while stooping forward, something in his back was heard to snap. This was accompanied by severe pain, and he fell. After that he could only stand when perfectly erect. He was carried across the isthmus on a litter, and reached New York on June 17. He remained there five weeks, and was then brought to Boston. The general health improved, but he was able to sit up only a short time, and spoke of "weakness in the bowels", and any exertion caused him to droop. He could not move without aid, and then on crutches. When he was seen on August 4 there was much pain across the middle third of the abdomen, and, while lying in bed, some in the chest. When sitting, he supported himself on his elbows. The back curved outwards while in the sitting posture. Appetite and digestion were good. His chief complaints were faintness, dyspnoea, weakness of the bowels, and constipation. The urine was normal in appearance, pulse 76. The temperature of the axilla was below the normal point. He was much emaciated. To the hand there was decided pulsation in the epigastrium. He was ordered a pill composed of sulphate of iron two grains, aloes one half grain, extract of nux vomica one-fourth of a grain, after each meal.

He was again seen on September 5. He had for a long time had difficulty in raising the right leg to get a stocking on, and he was trying to do this about the end of August, when he suddenly experienced, just above the right ilium, a feeling as if something gave way, accompanied by considerable pain, but without noise. Previously

to this he had been able to sit up four or five hours, and could walk to a chair in the room with the aid of crutches or an attendant, but still had the same trouble in holding himself upright. There was no dyspnoea unless the weather was hot. The bowels had been opened every day, but the fæces were very hard. No pulsation was felt in the epigastrium. The dose of aloes was increased to one grain, and an enema was ordered every day if there was no dejection.

On September 15 he spoke of noticing pulsation in the abdomen more internally than externally, but not perceptible to the touch. He was still troubled by a bloody secretion from the throat; this was noticed only after going to bed. He had not regained the power of standing, even with the help of his hands, and there seemed to be a weakness in the hips. He could, however, support his weight on his hands while sitting on the bed, and was able to be carried downstairs on the two previous days. Sneezing caused pain in the back. The appetite continued good, the urine was free, pulse 92, strong and full. He looked about the same, but thought that he had gained some flesh. Though the dejections were still scybalous, they were not the cause of suffering. He complained principally of pain in the epigastrium, and want of power over the legs. On September 27 he suffered much from the passage of hard scybala, though an injection was given. The pain had become much more severe, and was much increased by any attempt to move him. He had had high fever from early morning till noon, and did not seem to know any one, but in the afternoon he was better, and recognised his friends. He answered questions on being spoken to, though he lay in a dull heavy state. Respiration was good in the front of the chest, which was not examined behind; pulse 100, very full.

On September 28 he had passed a comfortable night, without an opiate, which he refused. He was able to help himself somewhat, and to turn upon his right side, complaining only of being tired of lying in one place. He continued to sink, however, and died on the 29th.

A necropsy was made forty hours after death. The ribs and sternum were soft and filled with red pulp. The vertebrae, particularly the lumbar, were sawn and broken down with ease, the bodies and processes being alike involved. They were filled with the same red pulp as the ribs and sternum, which is characteristic of osteomalacia. In the midst of the diseased parts were some islands of firm bone. The other bones were not examined. The difficulty of diagnosis was great. The symptoms pointed very clearly to the spine, which curved somewhat backwards. The pain, the sudden snap, and the subsequent loss of supporting power showed some positive lesion of the bone itself, such as cancer, caries, osteomalacia, or absorption, caused by the pressure of a tumour. While there was an absence of any other evidence of cancer or caries, the pulsation in the abdomen and the soufflé made it appear not improbable that an aneurism might explain the most prominent symptoms.

The connection between the increase of the medulla of bones and leucocythæmia had not then attracted attention, but there was nothing which suggested leucocythæmia before death, and nothing was found at the necropsy which has been considered characteristic of that disease, unless the condition of the bones themselves were such.

## RECENT PAPERS.

- On Resection of the Elbow in Case of Ankylosis. By Dr. Ollier. (*Revue Mensuelle de Médecine et de Chirurgie*, June 10.)
- Contribution to the History of Sarcomatous Tumours of the Soft Parts of the Palm of the Hand. By Dr. Gross. (*Revue Médicale de l'Est*, June 1.)
- Syphilitic Stricture of the Rectum: Rectotomy by a New Method. By M. Trélat. (*Le Progrès Médical*, June 23.)
- Milky Cyst of the Left Breast: Some Considerations on Mammary Galactocoele. By Dr. Gillette. (*L'Union Médicale*, June 20 and 22.)
- Treatment of Erysipelas in the Surgical Clinic at Greifswald. By Dr. H. Hüter. (*Berliner Klinische Wochenschrift*, June 17 and 24.)
- The Antiseptic Treatment of Empyema. By Dr. König. (*Ibid.*, June 24.)
- Three Cases of Subastragalar Amputation in Two Patients. By Dr. O. Risel. (*Deutsche Medicinische Wochenschrift*, July 6 and 13.)
- A New Method of Treating False Joints. By Dr. L. Rydygier. (*Ibid.*, July 6 and 13.)
- Prolapsus Cerebri after Gunshot Wound of the Skull: Recovery. By Dr. Kusmin. (*St. Petersburger Medicin. Wochenschrift*, April 29 (May 11).)
- A Case of Cancer of the Rectum permanently Cured. By Dr. R. Gersuny. (*Wiener Medicin. Wochenschrift*, June 29.)

## DISEASES OF CHILDREN.

BUCQUOY ON THE TREATMENT OF INTESTINAL INVAGINATION BY ELECTRICITY.—In the *Journal de Thérapeutique*, Dr. Bucquoy draws the following conclusions from three cases of invagination successfully treated by electricity. 1st. The application of electricity in the treatment of intestinal invagination, recommended by authors, but very rarely employed in these cases, gives very favourable results, which considerably diminish the gravity of the prognosis. 2nd. To ensure success, the electricity must be applied early and before there is any inflammation. Under these conditions it is borne perfectly well even by very young infants. Two or three sittings usually suffice to restore the normal action of the bowels, and to cure the invagination. 3rd. This method of treatment does not exclude others, especially the use of ice and cold lotions, which are valuable aids to it. FANCOURT BARNES, M.D.

CHEADLE ON AGUE IN CHILDREN IN LONDON.—The great interest of Dr. Cheadle's paper in the *British Medical Journal*, April 13, p. 521, consists in the report of two cases where the symptoms simulated so closely an attack of scarlatina as almost to deceive several medical men of experience.

On February 28, 1877, Dr. Cheadle was asked to see a medical friend's child, aged two years and nine months, suffering, as was supposed, from scarlatina; pulse 116, temperature 104; on the skin was an eruption closely resembling that of scarlatina eruption. The throat, however, was not congested, nor the tongue characteristic of scarlatina. The illness commenced two days before at 9 A.M., with a sharp shivering fit. A hot bath was given, after which a bright scarlet rash appeared all over the body; skin dry, burning, temperature 102°, pulse 110. After three hours the rash faded, and the child next day was playing about as usual. On the day Dr. Cheadle saw the child, at 7 A.M., the same series of symptoms set in; and so like was the attack to scarlatina, that preparations were made to send her to the Fever Hospital. The absence of faucial symptoms, and the history of the previous attack, decided Dr. Cheadle to await further developments, and next day the child was apparently well. Two days afterwards, a fresh attack decided the question

of giving quinine, which speedily put an end to all further alarm.

A second case, in a girl aged five years, occurred later in the year, commencing with a shivering fit, lasting half an hour to an hour, followed by burning heat and red rash all over the body, and terminating in profuse diaphoresis. Quinine quickly cured the child.

RICHARD NEALE, M.D.

OTIS ON INFANTILE LEUCORRHOEA FROM RECTAL IRRITATION.—In a clinical lecture on gonorrhoea (*New York Medical Record*, May 18), Dr. F. M. Otis calls attention to infantile leucorrhoea. He says:—A cause of an inflammation of mucous membrane, which does not vary in any practical degree from gonorrhoeal inflammation, is infantile leucorrhoea. This is recognised by all authorities as a contagious disease of the mucous membrane. A similar vaginitis may be communicated from it to other children, when the same sponges or bathing-cloths are used, and an ophthalmia is not rarely set up by means of it, which cannot be distinguished from true gonorrhoeal ophthalmia.

This form of leucorrhoea is caused, as generally believed, by irritation in a contiguous organ, the rectum. It has also been attributed to the irritation produced by teething. But, whatever the cause may be, an inflammation is set up in the vagina of the infant, which produces a discharge that cannot be distinguished from a gonorrhoeal discharge, and which may communicate a similar disease.

Some time since a lady called upon me, accompanied by her little daughter (between nine and ten years old). She stated that the child was suffering from a "bad disorder", which she believed had been communicated by a young man, who had been in the habit of playing with the little girl. The visit was for the double purpose of obtaining relief for the child and securing some advice as to the way of punishing the young man. On examination, the vulva was seen intensely reddened, and bathed in a profuse greenish purulent discharge. The hymen was perfect. The integument around the anus was irritated as if by scratching, and great itchiness in the vicinity was complained of. The rectum was found loaded with ascarides. The cause of the leucorrhoea was thus satisfactorily explained. Suppose, however, the youth had been subjected to an examination, and had chanced to have an old gonorrhoea—the probabilities would have been greatly against his being able to establish his innocence before any jury.

ATKINSON ON CONTAGIOUS VULVITIS IN CHILDREN.—Dr. Atkinson, of Baltimore, communicates to the *American Journal of Medical Science* for April six cases of contagious vulvitis, which had come under his notice in a charitable medical institution in that city. Under the use of cod-liver oil and citrate of quinine wine, and of various local applications, of which solution of nitrate of silver was by far the most efficacious, they recovered, though slowly.

The chief interest lies in the manner in which the affection was caused. For a year and a half the inmates of the institution had been liable to a contagious ophthalmia of a very obstinate character, and when the vulvitis broke out, there were two or three cases of conjunctivitis in the infirmary. Along with the ophthalmia there had also been many cases of catarrhal and ulcerative stomatitis. This was attributed by Dr. Tiffany, who was then in charge, to the ophthalmia; and Dr. Atkinson is "persuaded that



the discharges from either the ocular or buccal mucous membranes were conveyed to the vulval mucous membranes in some manner, most probably on the fingers of some of the girls, and was the active cause in the production of the vulvitis."

A. HENRY, M.D.

#### RECENT PAPERS.

- Convulsions in Infants, and the First Dentition. By Dr. R. Guaiata. (*Lo Sperimentale*, March 1878.)  
 On Simulated Diseases in Children. By Dr. Abelin. (*Central-Zeitung für Kinderheilkunde*, May 15 and June 1.)  
 On Diphtheritic Paralysis in Children. By Dr. Archambault. (*L'Union Médicale*, June 8.)  
 A Case of Invagination in a Child eight months old: Recovery. By M. Ludewig. (*Berliner Klinische Wochenschrift*, July 1.)  
 Tænia in Childhood, and the Treatment of Tænia by the use of Vermicides. By Dr. Bouchut. (*Gazette des Hôpitaux*, May 2, 1878.)  
 On Icterus Infantum, and the Moment when the Umbilical Cord should be Cut. By Ch. Porak. (*Revue Mensuelle*, May 10.)

### MATERIA MEDICA AND THERAPEUTICS.

RUTHERFORD ON THE ACTION OF DRUGS ON THE LIVER.—In a recent paper read before the Royal Society of Edinburgh, June 17th, 1878 (abstract in *Nature*, July 4th), Dr. Rutherford shows that sodium salicylate, the benzoates, ipecacuan, and various other substances, have a stimulating action upon the liver which has been hitherto unknown, and that, even if a purgative agent have no direct stimulating power on the liver, it diminishes the secretion of bile. The experiments were made upon dogs, and the author is careful to point out that it must still be left to clinical observers to discover whether these drugs have the same effect upon man, since it is impossible to argue that substances which stimulate the healthy liver of a dog would have the same effect upon the liver of a man.

D'ARCY POWER, B.A. Oxon.

DUCKWORTH ON NITRE-PAPER FUMIGATION AS AN EXPECTORANT.—The really valuable relief afforded in many cases of chronic senile bronchitis, and in spasmodic asthma, by this agent, finds an able exponent in Dr. Dyce Duckworth in the *Practitioner* for May. It is recommended that the coarsest brown paper procurable should be employed and that it should be thickly coated with Friar's balsam. Pieces, four to five inches square, burnt under the nose of the patient several times during the day, and combined with warm cordial drinks, form a powerful expectorant. A cup of hot tea or coffee, with a little brandy or essence of ginger, or a draught of hot water flavoured with peppermint or spearmint, is eminently effectual as an expectorant, given at night or early in the morning, to aged and enfeebled sufferers from bronchitis.

[The late Dr. Hyde Salter was a staunch advocate of nitre-paper, and his directions, given in the *Lancet*, vol. ii, 1858, p. 225, for the preparation of the paper differ materially from those of Dr. Duckworth. He says, "The object is to have as much deflagration of nitre and as little combustion of paper as possible. For this purpose the paper must not be very thin, or it will not take up sufficient nitre; nor very thick, or it will make the fumes too carbonaceous; but it must be moderately thick, and very loose and porous in its texture, so as to imbibe a sufficiency of the solution. The strength of the solution should be

saturate at the ordinary temperature. If a saturate solution be made with warm water, and the paper is very bibulous, it becomes too much impregnated with nitre, and burns too fast, with a sudden explosive flame. There should be no brown smoke in its combustion, but light, clear, and white fumes. The red blotting paper of moderate substance is the best. Some blotting or filtering papers appear to have a good deal of wool in them, they are loose, thick, and coarse. They should be particularly avoided, as they yield, on burning, a smoke of a particularly irritating and offensive kind, something like the smell of brown paper smoke, only worse." A series of typical cases fully justifies Dr. Salter's high opinion of the therapeutic value of the nitre-paper. Dr. J. C. Thorowgood (*Medical Times and Gazette*, vol. i, 1874, p. 64) values the nitre-paper equally with Drs. Salter and Duckworth, but believes that its full benefit is frequently not secured until the whole room is filled with the fumes.—*Rep.*]

THOROWGOOD ON THE USE OF MERCURY IN CERTAIN INFLAMMATIONS.—Dr. John C. Thorowgood, in a paper read before the West Kent Medico-Chirurgical Society, and published in the *Practitioner* for May, strongly advocates the more frequent use of mercury in many diseases accompanied by plastic exudation. The absorbent action of the metal is well seen in many syphilitic diseases of the lung and other parts, where persistent chronic deposits rapidly disappear under its use.

In non-specific inflammations, affecting both air-tubes and cells, as well as the pleural covering of the lungs, the curative value of the metal is well established. In the early stages of typhoid, mercury is given by many with the belief that intestinal congestion is thereby diminished, and the chances of hæmorrhage lessened. In spasmodic asthma, with underlying bronchitis, blue pill and squills at night, with bromide of ammonium and belladonna during the day, relieved several severe cases, the histories of which are given, by diminishing the congestion and promoting secretion. In many cases of obstinate and severe cough, due to bronchial catarrh, mercurials will effect a speedy cure, especially those cases coming on at night, accompanied by loaded urine, dyspnoea, some lividity of lips, and perhaps some impairment of resonance at the bases of the lungs indicative of congestion, with expectoration scanty and difficult to raise. In inflammation of the serous membranes of the chest, mercurials are not employed as freely as in Dr. James Hope's time, forty years ago. On his death-bed he dictated a paper that appeared in the *Medico-Chirurgical Review* of July 1841, wherein he laments the unsuccessful treatment of empyema. Dr. Laws' treatment he thought to be most effectual, but then he was too timid in his use of mercury, for fear of inducing hectic. Dr. Hope goes on to say, "I have steadily continued the gentle external use of mercury through the most violent hectic, coming on in tremendous paroxysms, twice a day, while I have counteracted this by strong broths and plenty of animal food." Dr. Hope reports thirty-five cases of empyema cured by these means in four years, some of them of great extent and chronicity. In acute pleurisy, the night and morning blue pill, with the external use of oleate of mercury, are most satisfactory in their results. In peritonitis, few doubt the value of small doses of calomel. The curative powers of mercury are best displayed in persons of robust habit, not advanced in years, and who happen

to be attacked with an exudative or congestive inflammation, attended with fever, loaded urine, and obstinately persistent against ordinary remedies. Alkalies, as a rule, accord better with all forms of mercury than acids.

**GOWERS ON THE TREATMENT OF THE BROMIDE RASH WITH ARSENIC.**—Dr. Gowers illustrates the beneficial effects of arsenic, combined with bromide of potassium, in curing the eruptions so frequently the result of this drug, by a series of cases in the *Lancet* (June 1878, p. 866). Twelve instances are reported, in all of which a cure resulted, and no fresh spots were developed during the continued use of the bromide, the eruption, however, recurring when the arsenic was not combined with the bromide.

**GOOLDEN ON THE THERAPEUTICS OF SULPHATE OF MANGANESE.**—Dr. R. H. Goolden (*Lancet*, June 1878, p. 882) first employed this drug in 1840, having noticed Dr. Pereira's account of the *post mortem* appearances in rabbits after poisonous doses, the stomach and intestines being found filled with pure bile. Ten grains in a tumbler of effervescing citrate of magnesia act as an efficient cholagogue. Combined with chalybeates, it enables these latter to be borne by many anæmic patients who otherwise could not take them. Dr. Goolden has used this salt extensively for the last thirty-five years.

**IMAGE ON OXALATE OF CERIUM IN PREGNANT SICKNESS.**—Mr. Image, in the *Practitioner* for June, confirms the vast value that Sir J. Simpson attached to this drug, but he dissents from the small doses generally given, believing that ten grain doses are most to be relied upon.

[Doubtless it was the small dose that caused the late Dr. Tanner and many others to distrust the oxalate, than which few drugs give more satisfactory results when given in proper doses.—*Rep.*]

**COLE ON CARBOLIC ACID IN PERTUSSIS.**—Mr. G. W. Cole writes from New Zealand (*Lancet*, May 1878, p. 777) extolling the use of carbolic acid both internally and by inhalation in the treatment of this disease. Several cases are given in support of his views, where both children and adults rapidly lost their coughs after the use of the agent.

[The value of this drug was known ten years ago to Mr. Blake, who published in the *Medical Times and Gazette*, (April 1868, p. 405) his experience of its great value, and gives a diagram of an useful vaporiser. Subsequently other observers have confirmed the therapeutic value of carbolic acid in this disease.—*Rep.*]

RICHARD NEALE, M.D.

**BERT ON ANÆSTHESIA BY NITROUS OXIDE.**—M. Paul Bert (*Gazette Médicale de Paris*) brought before the Société de Biologie, 11th May 1878, the results of experiments (before described by him) in which he produced anæsthesia without risk of asphyxia by means of nitrous oxide and oxygen under increased barometric pressure. A young dog, before the experiment, breathed twelve times a minute, his pulse being 136, and his rectal temperature 38.8 cent. (102.84 Fahr.) In thirty minutes, under a pressure of twenty centimetres, his temperature was 38.4 cent. (101.12 Fahr.) his pulse 130, and his respirations 12. Nitrous oxide and oxygen were then administered in the proportion of 80 to 20 per cent.; after several minutes, on pinching his toes there was no sign of pain and no reflex action, but still the animal was not inert; its state resembled

stupefaction after morphia rather than chloroform; at this period his temperature was 38 cent. (100.4 Fahr.), his pulse 144, and his respirations 14. The anæsthesia was kept up for thirty minutes, at the beginning there was no excitement, and, throughout, no disorder of the circulation; when the nitrous oxide was discontinued, return of consciousness was immediate, and without apparent discomfort; when released the animal made its escape, and was only recaptured with difficulty. M. Bert hopes to be able shortly to prosecute his researches on this subject. In reply to a question from M. Leven, M. Bert stated that diminution in the tension of the inspired mixture is made up by increase in the mean external pressure. The temperature and the torpor of the subject should also be taken into account.

**GOLTDAMMER ON THE RESULTS OF THE COLD-WATER TREATMENT OF TYPHOID.**—Dr. Goldammer, of the Bethany Hospital in Berlin, contributes to the *Deutsches Archiv für Klinische Medizin*, Band xx, a report based upon the careful observation and analysis of abundant material, with a view to determine the value of the cold-water treatment of typhoid fever. He compares the mortality and the duration of treatment since the introduction of the cold-water plan with the results previously attained by the expectant method. From 1848 to 1867, 2,228 cases of typhoid were treated by the expectant method, with 405 deaths = 18.1 per cent. From the introduction of hydrotherapy in 1868, to December 1, 1876, 2,086 cases were treated with 267 deaths = 13.2 per cent. The diminution of mortality amounted then to about five per cent. At the same time the average duration of treatment of the cases which terminated in recovery was lessened by 6.3 days, that is, from 46.1 to 39.8 days. Omitting from consideration those cases which from the time of admission were in a moribund state, the mortality would be found to be 15 per cent. for the first, and 10.5 per cent. for the second period, showing a diminution of mortality of fully one-third. The method adopted was a tolerably rigorous but not excessive hydrotherapy. Intestinal hæmorrhage, pneumonia and excessive cardiac weakness were considered contraindications for the full course of treatment. Although a decided adherent of this method, Goldammer does not, like many, recommend it indiscriminately in all cases. The long period of observation, the number of cases forming the basis of his report, and the fact that these were watched by the same person, in the same institution, and during several epidemics of different intensities, render the author's conclusions of more than ordinary statistical importance.

In concluding his report, Dr. Goldammer gives a minute account of the last three epidemics, in which 783 cases were observed. He failed to find, as is claimed by some, that intestinal hæmorrhage was increased by hydrotherapy. It took place fifty-one times, croupous lobar pneumonia eleven times, and pleuritis thirteen times. Joint-affections were also encountered in a few instances. In two cases there was an extensive pemphigus, a complication not heretofore referred to by writers on this disease. Both these cases terminated fatally. He very highly extols chloral in doses of from 15 to 30 grains in the management of those patients affected with sleeplessness and wild excitable delirium.

**HAYNES ON CRESOTINIC ACID IN ACUTE RHEUMATISM.**—Dr. W. H. Haynes (*Archives of Clinical Surgery*, May 23), reporting a case of Acute



Articular Rheumatism, says : This acid is obtained from the same basis as carbolic and salicylic acids, viz., coal-tar. Authorities say its antiseptic power is greater than the other acids mentioned in this category. Its greater remedial action in acute rheumatism, I think, will be fully demonstrated in a paper, soon to appear, comparing the results obtained by the use of these remedies in different cases, by another member of our staff. Perhaps its trial in some other diseases will show its greater efficacy than the ordinary methods now employed, and increase its reputation. It was introduced, as a therapeutic agent, into this country through the efforts of Dr. C. H. Lellmann. The great drawback to its more extensive use is the price, costing more than five times as much as the salicylic acid. The following is the formula given. *R. Acidi cresotini, ʒij; sodæ bicarbonatis, ʒ iss; aquæ, ʒ iv. M.* A tablespoon every two hours. To counteract the too great depressing effect on the heart, noticed as one of the results from the use of this remedy in some cases, we are in the habit, where it is thought to be necessary, of giving at the same time a few drops of the tincture of digitalis with each dose of the acid, or when this action has been marked in other cases it has been added to the treatment.

DA COSTA ON THE HYPODERMIC INJECTION OF DIALYSED IRON IN CHLOROSIS.—Dr. Da Costa (*Philadelphia Medical Times*, March 1878) reports a case of chlorosis treated by subcutaneous injections of dialysed iron. The patient, a girl aged twenty-one, had an inorganic systolic murmur at the cardiac base and a loud venous hum over the jugulars. By the daily injection of from fifteen to thirty minims of dialysed iron, at first diluted, later undiluted, as it was found that no irritation of the skin was caused, she regained health in three weeks. Dr. Da Costa suggests a trial of this mode in pernicious anæmia.

BOUCHARDAT ON THE ACTION OF DIALYSED IRON.—In the *Bulletin Général de Thérapeutique*, January 1878, Professor Bouchardat says the preparation called by this name, although it does not pass through the dialyser, is absorbed with difficulty. He regards it as an inert ferruginous preparation. Dr. Depaire of Brussels is quoted as holding the same view.

HAYES ON THE RATIONAL TREATMENT OF LEAD-POISONING.—In acute lead-poisoning (says the *Dublin Medical Journal*) the aim of the physician is first to render the lead in the alimentary canal insoluble, in order to prevent its absorption, and then to remove the (relatively) insoluble substance from the system. Both of these indications are very well met by the administration of sulphate of magnesium, which first renders the lead-salt insoluble, and then carries it off by the bowels. The chronic form of lead-poisoning is due to the absorption of lead into the tissues and organs, and differs from acute poisoning mainly in the fact that while in the acute form of the disease the great bulk of the poison is really outside of the body and producing in the various parts of the alimentary canal its own peculiar species of irritation, modified to some extent by the action of the smaller portion which is absorbed, in the chronic form nearly all the poison is inside of the body and producing its own peculiar physiological effects in the deterioration of the tissues and organs. This difference in the locality of the poison ought at once to indicate rationally a different mode of treatment,

and, to some extent, it is generally believed that this is attempted in the usual treatment of chronic lead poisoning—viz., by the administration of iodide of potassium. Dr. George Hay, however (*Phil. Med. Times*, March 16), on rational, rather than on experimental, grounds, says that instead of iodides we should give chlorides. In chronic lead-poisoning, he says, the lead is eliminated principally by the kidneys in the form of chloride of lead, or of oxide dissolved by chlorides or other alkaline salts. That is to say, nature eliminates the lead by making it soluble in water, in the form of chloride of lead, and then removing it by the urine. Therefore, when we give the patient iodide of potassium we simply render the lead less soluble than nature would make it, and instead of hastening its elimination we retain the poison in the body. Dr. Hay suggests that, of all the chlorides, that which seems to be most suitable to the economy is the common chloride of sodium. It might be administered in cases of chronic lead-poisoning in doses of one drachm three times a day, more or less, but never in quantity to occasion nausea.

WEBER ON HOT MUSTARD BATHS IN INFANTILE PNEUMONIA.—At a recent meeting of the New York Medical Journal Association (*New York Med. Record*, March 9, 1878) Dr. Weber read a paper strongly advocating the claims of hot mustard baths in the treatment of pneumonia occurring in children. He propounded the following theory regarding their mode of action. There were two agents in the baths, both of which acted upon the surface—1. The mustard, which was an irritant to the skin; and 2. The hot water, which dilated the cutaneous capillaries, thus assisting to increase the quantity of blood thrown to the surface of the body. The increased blood-supply to the surface relieved in a great measure the congested pulmonary circulation and the overloaded heart. The baths stimulated the nervous system and also favoured the interchange of gases in the blood through the skin. The advantages of the bath were said to be that it was easily prepared; the materials could be readily procured; its action was prompt; there was no danger in applying it. The bath was prepared by adding half a pound or a pound of ground mustard to a baby-tub of water, having a temperature ranging from 100° to 105° Fahr. The child was placed in the bath, and, while there, the surface was to be thoroughly rubbed until the skin began to look red, usually from seven to ten minutes, then taken out, wiped dry, and put into a bed previously warmed. No ill effects had been seen by allowing the genitals to remain unprotected. The bath might be repeated as often as every three hours.

LYNCH ON VERATRUM VIRIDE.—Dr. J. S. Lynch (*Transactions of the Medical and Chirurgical Society of Maryland*) considers that the physiological actions of veratrum viride are twofold, nauseant or emetic, and vaso-motor stimulant or arterial sedative. These two effects are due to the presence of alkaloids named veratria and jervia. The first-named acts as a local irritant, an emetic, sometimes a cathartic, and, like all nauseants, a depressor of the circulation. The second, jervia, without producing either vomiting or purging, retards the pulse, probably by increasing arterial and capillary contraction, but without diminishing the force of cardiac systole.

The quantity or dose required to produce the full effect of the drug varies very greatly in different in-

dividuals, and beyond a certain point increase of the dose is not attended with increased effects. The writer says he has frequently administered drachm-doses of the tincture without producing more effects than those of five or ten drops.

Apart from its influence as an arterial depressant, *veratrum viride* has no antipyretic effect. It is only, therefore, in those diseases in which the heat bears a distinct ratio to the rapidity of the circulation, and in fact depends upon increased oxidation merely, that this remedy can be expected to exert any antipyretic effect. In purely inflammatory diseases, it becomes the most potent, reliable, and effectual remedy known to medical science. By its use, a local inflammation which has produced a constitutional or sympathetic irritation can be restricted to its original locality, and the dangers of collateral hyperæmiæ and extension of inflammatory invasions completely prevented. In every condition, whether acute or chronic, in which there seemed to be danger of cardiac exhaustion, and conservation of the strength of that organ is indicated, *veratrum* may be used without disappointment in the result. Dr. Lynch does not allege that it will *cure* inflammation of any kind, nor does he know of any medicine that will do so.

Like digitalis, *veratrum viride* may be administered in diseased conditions which call for its use in large doses, and has the peculiarity of producing its effects suddenly, whether the effective dose has been large or small, and the effect produced does not seem to bear any relation to the amount taken.

The nausea and vomiting frequently accompanying the action of this remedy may be entirely prevented, without in the least modifying its action upon the heart, by combining it with one of the preparations of opium. Another means of modifying the local effect of the medicine upon the stomach, is the administration at the same time of moderate doses of carbonate of sodium or potassium.

*Veratrum* cannot be combined with alcoholic stimulants in any form, since these are physiologically antagonistic to it as far as its action upon the circulation is concerned.

**TANNER ON THE ACTIVE PRINCIPLE OF ERGOT.**—Mr. Alfred E. Tanner writes in the *Pharmaceutical Journal* as follows. On few substances has so much chemical research been expended with such discordant results as on ergot. No sooner has one observer announced the discovery of its active principle or principles than another publishes observations which entirely negative the conclusions of the first. Dr. Wright supposed the virtues of ergot to reside in the fixed oil, which constitutes about thirty per cent. of this drug. Wiggers subsequently announced the discovery of what he called ergotin, which has been since proved to be merely resinous matter, and which, as in the case of the oil, has been proved to have little or no effect. Bonjean, a pharmacien of Chambère, in 1843, was the first to prepare a really active form of ergot; this he called ergotine, or hemostatic extract. A few years since, W. T. Wenzell, of Wisconsin, announced the discovery of two alkaloids in ergot, which he named respectively ecboline and ergotine; to the former he ascribed very powerful effects, and stated that it possesses in a high degree the special medicinal properties of the ergot; in the latter, viz., the ergotine, little effect was found. The whole subject of the chemical constituents of ergot has been recently very carefully gone over with the view of determining with some

degree of certainty to what bodies it owes its peculiar action. This has been undertaken by Professor Dragendorff, of Dorpat, and Herr Podwissotzky, with the result that ergot owes the greater part of its activity to a principle called sclerotic or sclerotinic acid, which is present to the extent of about four per cent., and which is obtained by a tedious process from the ergot exhausted with water and precipitated by absolute alcohol. This substance has been extensively used hypodermically in Germany by Professor von Holst, and seems possessed of a very high degree of activity, four to five centigrammes (.6 or .75 grains) being the usual dose. It certainly has the merit that whereas the substances formerly announced as being active principles were prepared by means of powerful chemical agents, and therefore presumably more or less altered or actually formed during the process, viz., the sclerotic acid, has been separated entirely by means of alcohol, and therefore not exposed to powerful chemical action, a most undesirable proceeding with a substance so prone to change as ergot. The whole paper is a most interesting one, and will well merit careful study—and it will be found in the *Pharmaceutical Journal* for June 17, 1876. There is no doubt, should further trial prove the efficacy of sclerotic acid, that it will be found far superior as an agent for hypodermic use than the so-called ergotins at present used, all of which, however carefully purified, cause much pain and inconvenience in use, and are besides very prone to decomposition.

#### RECENT PAPERS.

- On Metallotherapy. By Dr. Eulenburg. (*Deutsche Medicinische Wochenschrift*, June 22 and 29.)  
 The Therapeutic Action of Iodoform: a Letter to Professor Binz of Bonn. By Dr. J. Moleschott. (*Wiener Medicin. Wochenschrift*, June 15, 22, and 29.)  
 On the Action of Anæsthetics (Sulphuric Ether, Chloroform, Chloral Hydrate) on the Respiratory Centre and the Cardiac Ganglia. By Dr. Vulpian. (*L'Union Médicale*, June 8.)

#### OBSTETRICS AND GYNÆCOLOGY.

**BUDIN ON COMPRESSION OF THE FÆTAL HEAD IN LABOUR.**—In the *Progrès Médical*, March 16, 1878, Dr. P. Budin draws the attention of obstetricians to the experiments of M. Duret, who has studied the different effects produced by commotion, contusion, and cerebral compression upon the fœtal brain. M. Duret has shown that sudden compression produces rupture of the fourth ventricle. This is caused by the sudden and violent distension, which the entry of fluid squeezed from the lateral ventricles gives rise to. This lesion may be produced by the sudden compression of the forceps. Dr. Budin is of opinion that this danger is avoided in the use of Tarnier's forceps, in which the compression exercised on the fœtal head is slight, and is gradually produced. Compression maintained for a lengthened period gives rise to bulbar anæmia and slowness of the pulse; in proportion as the pressure increases, the pulse diminishes in volume.

**YEDDER ON A NEW MIDWIFERY FORCEPS.**—In the *New York Medical Record*, 1878, Dr. M. R. Yedder describes a modification of the long forceps which he has introduced. He likens the forceps to a pair of artificial hands, lacking the wrist motion of the latter. To perfect the resemblance, Dr. Yedder



conceived that all that was necessary was the introduction of a hinge or joint, with limited action in the shank of each blade of the forceps. The instrument thus constructed he thinks is, by its closer resemblance to a human hand, more serviceable in practice than the instrument in general use. The peculiarity of the joint or hinge introduced is that it is self-acting, and allows of the blades becoming movable or fixed at the will of the operator. When traction is made, the self-adjusting mechanism of the joint fixes the handles in the position or at the angle in which they have been placed by the operator, thus preventing the fenestrated portion of the blade from moving either upward or downward. The instant traction ceases, the handles become free, and may be readjusted, to suit the exigencies or requirements of the case, and without any more trouble than would attend a similar motion of the human wrist.

**HAUSSMANN ON THE TREATMENT OF CRACKED NIPPLES.**—In the *Berliner Klinische Wochenschrift*, No. 14, 1878, Dr. Haussmann relates two cases of cracked nipples, which he treated with solution of carbolic acid. The mode of application consists in the renewed application every two or three hours during two or three days, of dressings soaked in a 2 per cent. solution of carbolic acid. In the first case Dr. Haussmann used a 5 per cent. solution, but he found the weaker (2 per cent.) solution equally effective. The advantages of this treatment are that the pain disappears almost immediately, and that the medicament, being in a fluid form, reaches all the recesses at the bottoms of the fissures and cracks. This is proved by the fact that, after each fresh dressing, a sense of smarting is felt throughout the whole breast. Before applying the child to the breast, it is necessary to wash the nipple. In the cases described by Dr. Haussmann, the mothers were able to suckle their children within a few hours after the first application of the carbolic lotion, and the nipples were entirely healed in two days.

**HOSMER ON A PECULIAR CONDITION OF THE CERVIX UTERI IN CERTAIN CASES OF DYSTOCIA.**—In the *Boston Medical and Surgical Journal*, March 1878, Dr. Alfred Hosmer describes a condition of the cervix, in certain cases of labour, which he says has never received recognition and description in any systematic treatise on midwifery in the English language. He describes it thus. "Midway between the os and the fundus, in the uterine cavity, there was discovered a powerful constriction, grasping and holding the pelvis of the child like a gigantic sphincter, whose force, perhaps, was surely to be augmented, through the law of reflex action, by every attempt that was made to overcome and remove it. The hand was carried up gently, steadily, perseveringly, and after passing the sharp, distinct, and well-defined edge, which in its continuity made a complete circle, with much difficulty reached the right foot. After considerable time, by dint of the persistent exertion of unusual force, version was accomplished, and a female child, weighing six or seven pounds, was delivered. The patient died seventy-two hours afterwards." This condition of the cervix was present in seven labours in four mothers. The women were all eventually lost; four of the labours were fatal ones, two of them becoming so before delivery. Of the children, but two were saved. Unlucky patients survived one or two labours complicated with this condition, only to perish in a subsequent one. Of the seven labours described,

four were in primiparæ, and that in all the head presented. In one case the constricting band of uterine tissue firmly surrounded the child's neck. In this case the mother died undelivered. At the autopsy the child was found lying in the abdominal cavity, having escaped through a laceration of the uterus at the point where pressure had been made on the head in an attempt at version.

**SIMPSON ON KNOTS IN THE UMBILICAL CORD.**—In the *Edinburgh Medical Journal*, June 1878, Dr. A. R. Simpson describes a case of a knot at the foetal end of the umbilical cord. He felt the knot through the unbroken membranes during a vaginal examination. Dr. Simpson remarks that of Chantreuil's four conditions which favour the production of knots on the cord, viz.—1. Length of cord; 2. Abundance of liquor amnii; 3. Movements of the mother; 4. (Exaggerated) movements of the fetus—two were markedly present in this case, the first and the fourth. The cord measured 35 inches instead of the usual 21½. Dr. Simpson concludes from the facts that he felt the knot before the membranes ruptured, and that it was near the foetal extremity, that the knot must have been formed during the intrauterine life of the child.

**MACDONALD ON THE ESSENTIAL PATHOLOGY OF PUERPERAL ECLAMPSIA.**—In the *Edinburgh Medical Journal* for May 1878, Dr. Angus Macdonald relates two cases of puerperal eclampsia, in which he found somewhat similar conditions in the brains at the necropsies. The venous sinuses were engorged; the corpus callosum was extremely pale and anæmic; the left corpus striatum peculiarly anæmic, except in one spot where there was a limited extravasation of blood in the anterior portion of the right corpus striatum where it dips down to form the nucleus lenticularis; the crura cerebri were also anæmic; the choroid plexuses were anæmic; both optic thalami markedly anæmic; the pons Varolii extraordinarily anæmic. As regards the condition of the kidneys, the result of Dr. Macdonald's examination is to lead him to consider the renal condition as one of limited degeneration of epithelial cells in certain peripheral tubules, with consequent closing up of the rest of the tubules, their tissues being quite healthy. From this he concludes that, so soon as a more healthy condition was initiated within the kidneys, the colloid plugs would drop out from the tubules, leaving the great bulk of the organ in a condition of health. Dr. Macdonald remarks that, while striving to prove that the poisoned condition of the blood resulting from arrest of renal function may so act upon the vaso-motor system as to lead to cerebral anæmia by spasm of cerebral vessels, and thus cause puerperal eclampsia, it does not seem improbable that when the kidneys are quite sound a certain amount of uterine irritation may so act as to induce reflex spasm of the vaso-motor centre, and cause eclampsia, as has been suggested by Cohen.

**AHLFELD ON THE CONDITION OF THE DECIDUA OF THE OVUM AS A SIGN OF MATURE OR IMMATURE OVA.**—In the *Centralblatt für Gynäkologie*, May 1878, Dr. F. Ahlfeld remarks that, as far as his knowledge of the subject goes, he has not seen the condition of the decidua in relation to the question as to a child's having been born prematurely or at term discussed. Dr. Ahlfeld finds that in the imperfectly ripe ova the structure of the decidua is essentially different from that in the ripe

ova. In the decidua of an ovum expelled in the last months of pregnancy there is present a very beautifully injected network of vessels. The earlier the ovum is expelled, the larger are the vessels seen on section in the decidua; the nearer to the end of pregnancy the ovum is expelled, the smaller are the injected vessels. At the end of pregnancy, the vessels have entirely disappeared. The structure of a decidua at full term is devoid of injected vessels, or only a few are to be found near the border of the placenta. The colour of the decidua is also changed; at full term it is of a whitish yellow appearance, while during the earlier months of pregnancy it is of a reddish hue.

MÜLLER ON MISSED LABOUR.—In his thesis at the medical faculty of Nancy, 1877, on the subject of missed labour, Dr. Müller, after long and laborious researches, after having collected, reproduced, and discussed most of the documents furnished by French, English, German, and Italian authors, does not hesitate to declare that there exists no authentic, convincing observation which attests the unlimited retention of the ovum in the human womb. Dr. Müller contends that most of the observations of cases in which the foetal *débris* escaped by the genital canal may be explained on the supposition that they escaped thence through an opening from the abdominal cyst of extra-uterine foetation. He says the "missed labour" of the English authors is nothing more than a labour which commences at term, in an extra-uterine gestation, but which does not continue.

EDIS ON THE DIAGNOSIS OF ABDOMINAL TUMOURS.—In the *Obstetrical Journal of Great Britain and Ireland*, May 1878, Dr. Arthur Edis relates six cases of abdominal tumours, in which the original diagnoses were found to be incorrect. The first was an unilocular ovarian cyst in a single girl aged eighteen. This had been supposed by the friends to be a case of pregnancy. The tumour was tapped, and over eight quarts of ovarian fluid drawn off. Case II was a pregnancy in a healthy single girl, and had been taken for an ovarian tumour. Case III was malignant disease of the omentum, put down as an extra-uterine foetation. The diagnosis was cleared up by the death of the patient, who succumbed eight months later with general cancerous affection of all the organs. The fourth case was one in which a fibroid tumour of the uterus was taken for a pregnancy. Dr. Edis remarks that it may seem strange that any practitioner could mistake the difference between ordinary pregnancy and fibroid, but he feels sure the mistake is by no means an uncommon one. The fifth was a case in which flatulent distension of the abdomen was set down as a spurious pregnancy and parturition. All the symptoms in this case were dispersed by the administration of a turpentine enema. In the sixth case, cirrhosis ascites and malignant disease of the liver were diagnosed as a multilocular ovarian cyst.

SCHULTZE ON DILATATION OF THE UTERUS BY LAMINARIA TENTS.—In the *Centralblatt für Gynäkologie*, No. 7, 1878, Dr. Schultze describes his mode of antiseptic dilatation of the os uteri by laminaria tents. The introduction of a laminaria tent is never effected when there is any wounded surface with which it might come into contact. Previously to the introduction of a tent, the length, direction, and calibre of the uterus are made out by means of pliant copper or silver sounds. If there be bleeding after the in-

troduction of the sound, the tent is not introduced until twenty-four hours later. The vagina is washed out with a three per cent. carbolic solution, and a tent, bent to the shape indicated by the pliant sound, is introduced. A pledget soaked in carbolic solution is packed in the vagina to support the tent. The above procedure is performed through a speculum, the patient being placed in the knee-elbow position, which is again resorted to for the removal of the old and the introduction of the new tent.

TISCHLER ON A CASE OF MONSTROSITY.—In the *Aertztliches Intelligenz-Blatt*, May 1878, Dr. Tischler relates a case of double monstrosity, the bodies of which were separate down as far as the loins, where they amalgamated. The children were dead. On the arrival of Dr. Tischler, two feet presented. Dr. Tischler, on examination, discovered the presence of two heads above the pelvic brim, and attempted to break up the wedge by decapitation, but failed to decapitate on account of the difficulty in reaching a neck, and the absence of room in the vagina. He finally extracted by the feet, one head emerging first and then the other. The monstrosity weighed 9 lbs.

RHEINSTAEDTER ON VOMITING IN PREGNANCY.—In the *Deutsche Medicinische Wochenschrift*, May 25, 1878, Dr. Rheinstaedter remarks that, in addition to the irritation of the nerves of the uterus caused by the stretching of the uterine fibres, the pressure of the surrounding pelvis upon the enlarged uterus is an important factor in the early vomiting in pregnancy. This theory is supported by the two following facts. 1. In those cases where the vomiting is not early controlled, it ceases for the most part from the moment when the uterus rises up out of the pelvic into the abdominal cavity. 2. The vomiting is most frequent and violent early in the morning when the bladder and rectum, especially the latter, are most likely to be distended. From these considerations, the author draws the following indications for treatment. Care must be taken early to keep the lower bowel empty, either by laxatives or by enemata. The diet is to consist of milk and light food, with wine, if it can be borne.

MOSETIG-MOORHOF ON A COMPLICATED CASE OF OVARIOTOMY.—In the *Wiener Medicinische Wochenschrift*, May 1878, Dr. von Mosetig-Moorhof relates a case of bilateral ovariectomy. Emilie Dudisz, 21 years old, *puella publica*, came under his care in July 1877 suffering from an abdominal tumour. Dr. Mosetig-Moorhof diagnosed an ovarian tumour and proceeded a few days afterwards to operate. After the cyst had been tapped by the trocar and drawn out of the abdomen, it was found to be the left ovary, and another tumour was found lying in the right hypochondrium. The second tumour proved to be a cystic dilatation of the Fallopian tube, the ovary at the extremity being normal and containing several corpora lutea. The ligamentum latum was transfixed with a catgut ligature, and the cystic dilatation, together with the right ovary removed. A clamp was applied to the pedicle of the left ovary, and the abdomen closed. A Sims's drainage-tube was applied. The recovery was rapid, and marked by absence of fever. The drainage-tube was removed from the vagina on the eighth day, the clamp fell off on the eleventh day, and on the fifteenth day the patient left her bed. Eight days later, she left the hospital in perfect health.

FANCOURT BARNES, M.D.



**GREENHALGH ON THE CURE OF DYSMENORRHOEA, STERILITY, AND CERTAIN AFFECTIONS OF THE UTERUS, BY A NEW FORM OF ELASTIC INTRA-UTERINE STEM.**—In the *British Medical Journal*, June 1878, p. 781, Dr. Greenhalgh describes and figures his new form of intra-uterine pessary, made of soft elastic India-rubber tubing, No. 13 catheter gauge, two inches and one-eighth in length, and terminating in a bulb, with diamond slits, which collapse when introduced on a dilator or a sound, and expand so soon as freed, thus retaining the pessary *in situ*. Antelexion and retroflexion, dysmenorrhoea, sterility, and menorrhagia, are all cured with a charming facility and certainty; so much so, that not one case of failure can be recorded where the stem treatment has been carried out.

**TAIT AND FORD ON REDUCTION OF INVERSION OF THE UTERUS.**—Mr. Lawson Tait and Mr. Alexander Ford (*Lancet*, June 1878, p. 791, and *British Medical Journal*, p. 787) record cases reduced by means of cupped stems, constant pressure being kept up by elastic bands attached to the abdominal belt. Mr. Ford employed a cup-shaped pessary with a curved stem, and succeeded in curing a recent case of inversion after eight days. Mr. Lawson Tait's case had lasted ten weeks, and was cured by a straight-stemmed cup, devised originally by Mr. White, of Buffalo, in two days.

**WHITWELL ON HOT WATER INTRA-UTERINE INJECTIONS TO ARREST POST PARTUM HÆMORRHAGE.**—Dr. W. S. Whitwell gives the history of the origin of this treatment in the *Lancet*, June 1878, p. 920. Having seen, during the years 1874-75, in Dr. Emmet's practice in New York, the value of hot water vaginal injections in all pelvic inflammations, he on one occasion noted the great influence it exerted in checking hæmorrhage after partial removal of a sarcoma from the fundus uteri.

In August 1875 Dr. Whitwell first attempted to check severe *post partum* hæmorrhage by injecting hot water into the uterus, with immediate success, and subsequently he has used it with unflinching good results. The advantages of this treatment are thus summed up. 1. It is easily attainable; 2. It is absolutely safe, if care be taken to exclude air from the syringe; 3. It stops hæmorrhage, not by artificial plugging, but by causing a natural contraction of the womb; 4. It is cleanly, and a disinfectant, such as carbolic acid, can easily be added; 5. By imparting heat, it rallies an exhausted patient, and gives power to the muscles for contracting, instead of, as is the case with ice, abstracting what little heat remains, and so benumbing and paralyzing.

The *Medical Times and Gazette*, August 1878, p. 159, in a report of a paper by Dr. Windelband, of Berlin, gave an account of this treatment, which had been found applicable to all kinds of uterine hæmorrhage.

Dr. Runge, in a paper in the *Berliner Klinische Wochenschrift*, March 1877, also testifies to the great value of the treatment. At the Rotunda Hospital, in Dublin, under Dr. Atthill's care, the injection of water at a temperature of 110° forms the routine treatment in all suitable cases.

M. Ricord, in the *Union Médicale*, June 5, 1877, writes: "Hæmorrhages in general, and metrorrhagias in particular, whatever be their proximate cause, are, as is well known, very frequently difficult to arrest. Hemostatics internally, astringent injections of every kind, plugging, etc., generally fail.

But one means has almost had infallible success in my hands, viz., the injection of hot water at 50 c. (122° Fahr.) carried directly against the cervix uteri by aid of a tube of an irrigator, from which the caoutchouc cannula has been removed.

[In the reporter's practice several cases of severe menorrhagia, previously treated with varying success with large doses of secalæ, gallic acid, ergotin, by all methods, liq. vinicæ, cannalis, oxide of silver, etc., have readily yielded to hot vaginal injections, or to hot applications to the loins, as originally suggested by Dr. Chapman in an instructive paper contributed to the *Medical Times and Gazette*, December 1875, p. 649. This gentleman therein comments upon two cases treated by Dr. Noël Gueneau de Mussy, in which singular and untoward effects resulted from the application of water, too hot, to the spine, Dr. Chapman advising the temperature to range between 115° and 120° Fahr. In the *Bulletin de Thérapeutique* for September 30, 1877, Dr. Bailly advocates the use of warm baths, about 93° Fahr., employed for twenty to thirty minutes in all kinds of uterine hæmorrhages, but more especially in that form occurring after labour, which he designates "secondary puerperal hæmorrhage", coming on from the second day to a month. In conclusion, the application of heat by hot enemata has frequently proved in the reporter's practice equally valuable as other methods and freer from objections, seeing that the prejudices of both patients and friends are often greatly shocked at the idea of hot baths and poultices, whereas one can more easily induce them to wash out the bowel with hot water enemata, when the result *quoad* the uterine hæmorrhage is frequently most gratifying.—*Rep.*]

**CHRISTIE ON THE ARREST OF UTERINE HÆMORRHAGE BY FLUID PRESSURE.**—Mr. David Christie (*British Medical Journal*, June 1878, p. 808) describes a method of arresting uterine hæmorrhage by fluid pressure. He introduces an elastic bag into the uterus connected with a tube seven feet and a half in length, the free end of which, after the bag is filled, is placed in water at the proper height. Mr. Christie reasoned that, as a tube placed in an artery has a column of water raised seven and a half feet by the heart's action, so his method would effectually arrest any hæmorrhage that could occur, and allow the womb to contract and relax without the pressure of the water being interfered with.

**CLAY ON MATERNAL MORTALITY.**—Mr. Clay, in the course of a recent lecture at Queen's College, Birmingham, contended that our modern system of education of young women and girls subjected them to intellectual training so elaborate and severe as gravely to affect their physical health and the proper discharge of the duties of their sex in after life. At the present time girls are worked equally as hard as their brothers, who have no restriction as to athletic exercises, while the only recreations allowed to girls—evening entertainments—too frequently act detrimentally upon their constitution. Ignorant of the most ordinary physiological laws, they become listless, and disregard food and other personal requisites. Girlhood thus misspent, the prime of life finds the woman incapable of enduring the fatigue which the proper supervision of a household requires. It is a question of some moment, now that the advantages of education are reaching the masses, that the system adopted should not tend to produce future phy-

sical deterioration, and that the intellectual strain of females should be modified, so as to bring it within limits consistent with a strict regard to the capabilities and ultimate destiny of girls.

RICHARD NEALE, M.D.

### RECENT PAPERS.

- On the Quantity of Blood in the Placenta. By Dr. L. Meyer. (*Centralblatt für Gynäkologie*, May 11.)
- The Exact Determination of the Position of the Uterus in the Living Woman. By B. S. Schutze. (*Betz's Memorabilien*, xxiii Jahrgang, 4 Heft.)
- The Hot-Water Treatment of Uterine Hæmorrhage. By Dr. A. Valenta. (*Betz's Memorabilien*, xxiii Jahrgang, 4 Heft.)
- On the Value of Rapid Dilatation of the Urethra and Neck of the Bladder as an aid to Uterine Diagnosis. By Dr. J. H. Croom. (*Obstetrical Journal*, May.)
- Two Cases of Inversion of the Uterus following Delivery. By Dr. James Braithwaite. (*Ibid.*)
- On Hydrotherapy for Women: its Influence on Menstruation, Pregnancy and Delivery. By Dr. Sieffermann. (*Gazette Médicale de Strasbourg*, Nos. 3 and 5, 1878.)
- On Indications and Counter-indications for Ovariectomy. By Dr. Kœberle. (*Bulletin Général de Thérapeutique*, May 25.)
- On the Complication of Pregnancy and Labour with Vesico-Vaginal Fistula. By Dr. Cohnstein. (*Berliner Klinische Wochenschrift*, May 20.)
- On the Nervous Disturbances which accompany Uterine Affections. By M. Martineau. (*Gazette des Hôpitaux*, May 25.)
- Pathological Anatomy of Chronic Metritis. By M. de Sinety. (*Gazette Médicale de Paris*, June 1.)
- On what day should the Lying-in Woman leave her Bed? By Dr. O. Kästner. (*Berliner Klin. Wochenschrift*, June 10.)
- Perforation and Cranioclast. By Dr. E. Bidder. (*St. Petersburg Med. Wochenschrift*, May 27 (June 8).)
- Two Cases of Vesico-Vaginal Fistula treated by Bozeman's Method. By Dr. J. Massari. (*Wiener Medizin. Wochenschrift*, June 22 and 29.)
- On Total Extirpation of the Uterus. By Dr. W. A. Freund. (*Centralblatt für Gynäkologie*, June 8.)
- Treatment of the Vomiting of Pregnancy. By Dr. F. D. Lente. (*New York Medical Record*, June 22.)
- On Metallic Sutures in Vesico-Vaginal Fistula. By Dr. Francesco Parona. (*Annali Universali di Medicina e Chirurgia*, June.)
- Lectures on the Diagnosis and Surgical Treatment of Abdominal Tumours. By Mr. T. Spencer Wells. (*British Medical Journal*, June 15, 22, 29; July 6, 13.)
- The Treatment of Sore Nipples. By Dr. Steiner. (*Berliner Klinische Wochenschrift*, July 1.)

## REPORTS OF FOREIGN SOCIETIES.

### ACADEMY OF MEDICINE IN PARIS.

April 16. *Inoculability of some Cutaneous Affections*.—M. Jaccoud presented for Dr. Vidal, of the Saint-Louis Hospital, a paper bearing the above title. The author's experiments and researches went to show that the pustule of ecthyma, the vesico-pustule of impetigo, the vesicle of herpes, the bulla of the epidemic pemphigus of infants, could be reproduced either on the subject suffering from the affection, or on a healthy individual. Other lesions, though perfectly marked and typical were not inoculable, as eczema, zona, pemphigus diuturnus, and perhaps varioliform acne.

*The Dressing of Wounds*.—The second part of M. Guérin's communications on the dressing of wounds was devoted to the description of apparatus for pneumatic occlusion. The advantages of this method did not consist only in suppressing suppuration, but in preventing and combating changes in the pus. M. J. Guérin subsequently reported cases of amputation performed according to his plan by various surgeons, and extracted from them the peculiarities likely to throw light on the conditions both of success and failure in this plan.

On April 23 he concluded his communication. He

said that pneumatic occlusion had another mission than assuring the success of amputations; it aspired to suppress them in the majority of circumstances in which they had been held to be indispensable, as in gunshot wounds of the joints. After having shown the peculiarities of these lesions since the changes in the weapons, M. J. Guérin demonstrated the successful results yielded by pneumatic occlusion in the treatment of persons wounded by fire-arms. These highly satisfactory results attested the constant progress made by conservative surgery.

April 30. *Local Morbid Temperatures*.—M. Peter communicated the result of a long series of researches on the temperature of the thoracic wall in acute pleurisy, the variations of that temperature according to certain determined conditions, as well as its relations with the normal average temperature, and with the parietal temperature of the sound side. The principal results determined by him were these.

1. On the pleuritic side, the parietal temperature is always higher than the average temperature, which is 35.8 cent. (96.6 Fahr.)
2. The elevation of the parietal temperature increases like the effusion, and corresponds to the period of secretive activity of the inflamed pleura.
3. The rise of the parietal temperature decreases in the period of the effusion state.
4. The pleurisy likewise raises the temperature of the sound side, but less than that of the affected side.
5. The parietal temperature falls gradually when the effusion becomes spontaneously absorbed, but it still remains for some time higher than on the healthy side, or than in the normal condition, and this temporary persistence of the local increase of temperature explains the possibility of relapse.
6. In the case of pleurisy without effusion, diaphragmatic pleurisy, for instance, the local rise of temperature is less and the return to normal temperature occurs more rapidly.
7. The absolute rise of the local temperature of the diseased side is more considerable than the absolute rise of the axillary temperature, although the axillary thermic figure may be higher than the parietal thermic figure.
8. After thoracentesis, the parietal temperature rises immediately on the punctured side. If the effusion be not reproduced, the parietal temperature soon decreases. If the effusion be reproduced and then become absorbed, the rise of temperature persists for some days, and decreases afterwards. If the effusion be reproduced and a new puncture be rendered necessary, there is then a local rise of temperature, followed by a general rise, and a stationary condition of the local temperature, with the reproduction of the effusion. It remains to be seen how the parietal temperature is modified when the effusion is reproduced in a purulent form. The local rise of temperature after puncture is the consequence of hyperæmia à vacuo; this purely mechanical hyperæmia is a natural addition to the preceding inflammatory hyperæmia, against which puncture has been ineffective. The result is an augmentation of tension in the still inflamed vessels of the pleura. The freshly exuded liquid may be richer in leucocytes and in blood-corpuscles; the purulent transformation of the renewed effusion is conceivable in this manner in certain cases in which puncture has been made during the highly febrile period of the pleurisy. Finally, this accumulation of hyperæmia, this sudden return of the blood into the pleural cavity (in the pleura as in the lung) explain the syncope, the pulmonary congestion, the consecutive albuminous expectoration, the pain and oppression sometimes extending to suffocation.



*The Germ-theory, and its Application to Medicine and Surgery.*—M. Pasteur, in his own name and in those of M. Joubert and Chamberland, communicated a paper bearing the above title. Septicæmia and the septic vibrio which is its agent were the principal subjects of this study. In the same way as the bacteridia in charbon, the septic vibrio was submitted to a series of processes of cultivation. The result had been that, on contact with the air, not only it was not developed, but the liquid which contained it finally lost its virulence. It was quite otherwise when the operation was conducted in a perfect manner, or in presence of carbonic acid. If new blood exposed to the air could become septic, even when the air destroyed vibrios, it was because that which was true of a septic fluid loaded with adult vibrios produced by fissiparous generation, was no longer so when the vibrios had become transformed into these germs. Now the germ-corpuscles were produced on the sole condition that the vibrios had been in a thick layer during some hours, the deep strata being thus protected against the oxygen by the upper layers; and they were always ready for fresh cultivation and fresh inoculations. A liquid containing germ-corpuscles retained its virulence even in contact with the air; only the germ-corpuscles remained absolutely sterile so long as they were not *in vacuo* or in presence of carbonic acid. It resulted from this that the best means to which recourse could be had to prevent death in simple septicæmic accidents would consist in incessantly washing the wound with ordinary aerated water, or causing the atmospheric air to have free access to its surface. The adult vibrios would perish and their germs would remain sterile. The septic vibrio multiplied with remarkable facility. The organism did not always resist this invasion. Hence the advantages of antiseptic dressings and the most minute precautions with regard to the instruments, etc. All vibrios were not anaërobic like the septic vibrio; one of the most common of them, frequently found on the surface of infusions of vegetable matters exposed to the air, was aerobic. It was harmless, because it could not exist at the temperature of animal life. Another vibrio not yet pointed out, and of which the properties could throw a new light on purulent infection, was on the contrary able to multiply itself in the living body. After having given its principal characteristics, M. Pasteur stated that, when inoculated under the skin, it had the power of producing not only pus but metastatic abscesses; in a word, purulent infection and death. M. Pasteur casually touched on the formation of pus. In his opinion, it was the red blood-corpuscles which made the pus-globules by a pure and simple transformation. Finally, he pointed out the effects obtained by the simultaneous action on the living body of specific minute organisms, the pus-generating organism, and the septic vibrio or anthracoid bacteridium; so that, according to the proportions of the organisms employed, purulent infection exempt from any putrid element, purulent putrid infection, anthracoid purulent infection, and varying combinations of these lesions, might be produced at will.

May 7. *Lead-poisoning in Cameo Polishers.*—M. Proust read a paper in which he established the existence of lead-poisoning in cameo polishers. The cause of the poisoning was rendered more powerful when the polishers, not content with the usual plan, moistened the lead-cylinder with acid, a method which accelerated the work, and gave a more perfect finish to the production. The use of a copper cylin-

der should be made more general, and it would be useful to enlighten the workmen as to the causes of their ailment.

*Dressing of Wounds.*—M. Alphonse Guérin spoke on dressings. After having refuted several opinions on the cause of purulent infection; that of M. Gosselin, by the introduction of contaminated air into the respiratory passages; that of M. Lefort, by phlebitis; he maintained that purulent infection was a miasmatic malady. This view had led him to the use of the cotton-wool dressing, and the most brilliant successes had shown him to be in the right. Doubtless, apart from the theory, it is necessary to take into consideration the advantages of a dressing in which the soft parts and the bones were fixed in the most absolute immobility; elastic compression, which was never too powerful, opposed to the stagnation of liquids, and where the temperature was constant, the rarity of the dressings exercise a favourable influence. But the principal point with M. Guérin was the obstacle to the introduction of germs by the filtration of the air, and M. Pasteur's new discoveries, notably that of the septic vibrio, confirmed in a striking manner the correctness of this view. It was in vain to object that vibrios had been found under the wadding, that this dressing produced erythema, erysipelas, purulent foci; it was much rather to the defective application of the apparatus than to the method itself that these failures must be ascribed. M. Guérin concluded by an account of the results of his practice at the Hôtel Dieu during the last four years.

#### ACADEMY OF SCIENCES IN PARIS.

April 8. *Carbonic Oxide.*—M. Gréhaut submitted a paper on the absorption of carbonic oxide introduced into the air in small quantities. He related the following experiment. He compounded in a large India-rubber bag a mixture of 100 litres of air and 225 cubic centimètres of pure carbonic oxide, which made one part of toxic gas in 392; after causing this mixture to be respired, the jugular vein of a dog, weighing nine kilogrammes, was laid bare, and by a long India-rubber tube, introduced into the vena cava inferior at the cardiac end, by the help of a syringe thirty cubic centimètres of blood were aspirated. This was injected into a flask, and defibrinated by shaking for several minutes. There was then fitted to the animal's head an India-rubber muzzle connected with the tap of the balloon containing the mixture of air and of carbonic oxide, and the animal was made to breathe in it for half an hour. During the last two minutes, a second charge of defibrinated blood was drawn from the vena cava inferior. Then the animal was made to breathe in the open air, and at the end of half an hour a third specimen of blood was taken. Each of the flasks containing blood was filled with oxygen and shaken, so as to cause the defibrinated blood to absorb the largest volume of oxygen; each specimen was introduced successively into the absolute vacuum of the apparatus for the extraction of the gases of the blood. The gases were completely extracted, analysed, and reduced dry to zero, under the pressure of 76 centimètres. The first specimen of normal blood had absorbed 28.3 cubic centimètres of oxygen to 100 cubic centimètres; the second specimen of blood, taken half an hour after partial poisoning, only absorbed 14.9 cubic centimètres of oxygen to 100 cubic centimètres of blood; finally, the third speci-

men of blood absorbed 20.3 cubic centimètres of oxygen per cent., consequently, during the half hour following the partial intoxication, when the animal breathed the fresh air, the blood had exhaled 5.4 cubic centimètres of carbonic oxide per cent.; an elimination which took place in nature. The gas in the balloon, analysed by the oxide of iron apparatus heated to red heat, contained no more than 128.4 cubic centimètres of carbonic oxide; consequently 126.4 cubic centimètres of carbonic oxide had been fixed by the blood, the atmosphere contained in the blood after this absorption of toxic gas contained no more than one part in 7.79 of carbonic oxide. It resulted from this experiment that an equally low proportion of carbonic oxide in the atmosphere sufficed to maintain in the blood 3.4 cubic centimètres of this gas per 100 cubic centimètres of the fluid. Thus about half of the hæmoglobine was combined with the carbonic oxide, and the animal had only at its disposal the other half intact to absorb the oxygen. The author concluded that the man or animal constrained to respire for half-an-hour in an atmosphere containing only one part in 779 of carbonic oxide, absorbed gas in a sufficiently large quantity for about half the red corpuscles combined with the oxide of carbon to become incapable of absorbing oxygen, whilst, in an atmosphere containing one part in 1449 of carbonic oxide, about a fourth of the red corpuscles combined with this gas.

April 15. *Relation of Urea to Convulsions.*—MM. V. Feltz and E. Ritter communicated experiments to show that pure urea never brought on convulsive symptoms. Urea injected into the blood was eliminated very rapidly by the urine, and when it existed in considerable quantities in the organism it did not, as generally supposed, undergo a rapid transformation into carbonate of ammonia. Dogs into which urea was injected, after the renal vessels were tied to prevent the rapid elimination of the poison, showed no more marked convulsive symptoms than others in which the same ligature was made without the injection. The convulsive symptoms observed with urea were produced by an impure substance containing ammoniacal salts. The authors summed up in the following conclusions. 1. Pure urea, whether natural or artificial, injected into the venous system in large quantities, never brings on convulsive symptoms; it is rapidly eliminated by the secretions. 2. There are no ferments in the normal blood which convert the urea into ammoniacal salts. The rapidity of elimination cannot be regarded as the cause of this non-conversion, for by the suppression of the renal secretion the elimination of the urea may be retarded without accelerating the supervention of the eclampsia. The urea which in large doses brings on convulsions, is always impure urea which contains ammoniacal salts, which are easily shown to be present by Nessler's reagent.

*Charbon.*—M. Toussaint presented a note on the action of bacteridia in charbon. In anthracoid infection, three modes of penetration of the virus might be present.—1. Inoculation; 2. Direct transmission into a vessel by injection; 3. Penetration followed by vascular ruptures. In these three cases, said the author, the bacteridia gradually reached the tissues adjacent to the spot where they had made an entrance, filled the vessels and the lymphatic glands, and so penetrated into the interior of the tissues and the vascular system.

*The Chorda Tympani.*—M. A. Vulpian communicated his experiments on the true origin of the

chorda tympani. Some anatomists made the chorda tympani proceed from Wrisberg's nerve, and others from the facial nerve. According to M. Vulpian, the real origin would be the trigeminal. The experiments made by the writer were as follows. He divided the facial nerve at its entrance into the internal auditory foramen in several dogs. Section of the nerve made at that point affected the nerve of Wrisberg. Histological examination of the facial nerve and of the chorda tympani was made from ten to twenty days after the experiment. Whilst all the peripheral branches of the facial nerve were found in a state of more or less advanced atrophic change, according to the time which had elapsed since the day of operation, the nerve-fibres of the chorda tympani, with the exception of five or ten at most, were always in the most healthy condition. In these cases the great superficial petrosal nerve was changed; it, however, contained some scattered healthy fibres. M. Vulpian had likewise constantly found that the nerve-branches going to the internal muscle of the malleus only contained, in these conditions, healthy fibres. In other dogs, he divided the facial nerve near its true origin below the inferior wall of the fourth ventricle. The results were absolutely similar. All the fibres of the peripheral ramifications of the facial nerve, examined several days after the operation, showed various degrees of atrophic change, according as the animal had survived a shorter or longer time. The chorda tympani, as in the preceding case, remained perfectly healthy, and contained so small a number of changed fibres that they could only be perceived with difficulty. This first series of experiments would almost lead to the conclusion that the chorda tympani does not proceed from the facial nerve, properly so called, nor from the nerve of Wrisberg. But it might indeed be that the chorda tympani, although really emanating from the facial nerve or the nerve of Wrisberg, might have for centre the corpus geniculatum, which would fulfil, for this nerve, the part played by the ganglia of the posterior roots in relation to these roots. It could be easily explained, if it were so, why the sections of the facial nerve or the intermediary nerve, performed at the level where these nerves penetrate into the internal auditory orifice, and consequently between this ganglion and the medulla oblongata, did not result in the change of the chorda tympani. The foregoing experiments could not then afford a decisive answer to the question. M. Vulpian had been obliged to undertake other experiments on rabbits to discover what influence intracranial section of the trigeminal nerve would have on the chorda tympani. Although very numerous, they yielded but scanty results of a decisive character, because several animals died too few days after the operation for the divided nerves to show any very decided changes, or because in several of them the section of the nerve was far from complete. In several rabbits, too, the facial nerve was cut or crushed at the same time as the trigeminal nerve was divided. In some experiments, the trigeminal nerve having been thoroughly divided inside the cranium, the animals survived at least from eight to twenty days. When the facial nerve was cut or crushed at the same time as the trigeminal nerve, the fibres of the chorda tympani were found more or less changed, according to the time which had elapsed since the operation. When the trigeminal nerve alone was operated on, the results varied, probably according as the division was more or less complete. M. Vulpian had found great difficulty in entirely dividing the trigeminal nerve



in the cranium without making mortal wounds; almost, if not quite always, one branch or other of the nerve escaped division. In cases in which the trigeminal nerve was divided, except a portion of the superior maxillary branch, and in which the facial nerve had escaped the reach of the instrument, the chorda tympani was completely changed. The examination, whether of the intrafibrous part of the facial nerve on this side of the corpus geniculatum, or of the branches of this nerve at the level of the masseter, showed that all the fibres were healthy. Whenever the branches of the masticatory nerve were found in a changed condition, the nervous filaments going to the internal muscle of the malleus were also totally altered.

## SEVENTH CONGRESS OF THE SOCIETY OF GERMAN SURGEONS.

(Concluded from page 271.)

*Embolic Necrosis.*—Dr. Koch (Berlin) read a paper on the effects produced by obstruction of the nutritious arteries of bones. Ligation of the nutritious artery of the tibia immediately before its entrance into the bone did not cause any recognisable disturbance of the nutrition of the marrow, or of the adjoining compact tissue. Embolism of the branches of the first order of this artery with coarse masses also remained without effect. Solution of chloride of sodium (0.5 per cent.) injected into the nutritious artery of the tibia after removal of all the soft parts, soon appeared at the upper surface of the ankle-joint under a pressure scarcely greater than the physiological arterial pressure. The introduction of foreign substances into these arteries is followed by necrosis only when the foreign bodies are impregnated with septic matters, or when they are so finely divided as to be capable of entering the capillaries. In the latter case, as the direction of the nutritive artery of the tibia is towards the ankle-joint, they must plug the capillaries at the lower end of the bone, and give rise to osteoperiostitis and osteomyelitis, which appear first in the region of the ankle and extend to the tarsus. But, even when only very small quantities of such substance are introduced, the osteomyelitis generally becomes diffuse, and leads to necrosis of at least the whole shaft of the femur. Dr. Koch said further that his experiments showed that false joints and delayed formation of callus did not depend on injury of the nutritious artery.—Dr. Kolaczek (Breslau) had in 1876 observed a case in which necrosis appeared in six symmetrical parts of the body—viz., both clavicles, both humeri, and both radii. He first thought that the disease was due to embolism, but it now appeared more probable that it was due to vaso-motor disturbance.—Dr. Riedel (Göttingen) said that quicksilver introduced into the arteries of bones did not only act mechanically but also chemically. When it was used, the phenomena of irritation that were produced could not be explained by the formation of infarcts alone. The mercury, he thought, had a caustic action on the tissues.—Dr. Gussenbauer (Liège) said that mercury produced suppuration, while different substances did not do so. Some years ago, he made researches in the diseases of bone to which workers in mother-of-pearl were subject, and found that the process was one of embolism; and further observation had proved to him that, in growing animals, including

man, the capillaries of the marrow formed loops, arranged towards the diaphysis.—Dr. Koch said that there was no evidence that mercury acted chemically. It passed into the capillaries and obstructed them, producing necrosis and suppuration.

*Asymmetric Pelvis.*—Dr. Riedinger (Jena) showed specimens of and drawings from asymmetric pelves, in one of which the left lumbar vertebra was on one side adherent to the sacrum, thus assuming the character of a sacral vertebra, while in another the first sacral vertebra was not united to the remainder of the sacrum, but assumed the character of a lumbar vertebra. The first of these anomalies had been described by Rokitsansky, who called attention to the consequent asymmetry of the pelvis. This was, however, very unimportant. Much more important was the unequal height of the spinal column and the resultant scoliosis. The spine and crest of the ilium were higher on one side than on the other. Too little attention had been paid to these cases of scoliosis. They were, for instance, scarcely mentioned in Bardeleben's *Handbook*. Rietz of Jena, had seen this form of scoliosis in the living subject sixteen years ago, and Dr. Riedinger believed that the abnormality was often present in cases which were described as instances of habitual scoliosis, from using one leg more than the other to support the body. The recognition of this form of spinal distortion was not without importance in therapeutics. The apparatus ordinarily used were of little value, but benefit was to be expected from the employment of gymnastic exercises.—Dr. von Langenbeck believed that the malformation described was not rare. He thought, however, that in general the scoliosis was only developed after some time.

*Excision of the Large Intestine.*—Dr. Gussenbauer (Liège) related a case of excision of the rectum. On December 6, 1877, he was called to a patient in Brussels, who for six days had suffered from complete intestinal obstruction. He had had constipation for nine or ten months, and a tumour had been detected in the left hypochondrium, which, gradually increasing, produced complete obstruction, so that the belly was distended like a drum. No sign of the tumour could be detected by ordinary palpation, but, on rectal examination by Simon's method, Dr. Gussenbauer found at the lower end of the ascending colon, above the sigmoid flexure, a tumour about as large as a fist, partly compressing the colon, partly projecting into the abdominal cavity, and adherent to one of the convolutions of the small intestine and to its mesentery. The tumour appeared to be freely movable and distinctly defined. All attempts to pass a tube through the strictured portion of bowel were without result. It was therefore decided to operate; and, after considering various plans, a radical operation for the removal of the tumour was determined on. With this object the abdomen was opened under antiseptic precautions, by an incision in the linea alba, from which a transverse incision was continued on each side. In separating the tumour from the small intestine the latter was laid open, and was closed with three catgut sutures. The separation from the mesentery was easily effected; three arteries regained ligature. Dr. Gussenbauer next proceeded to perform excision of the descending colon. For this purpose he first divided the peritoneal attachments of the bowel to the posterior wall, but, in doing this, the intestine was lacerated and the contents escaped. Compression of the bowel with the finger above and below the tumour was very difficult, on account of its adhesion to the

posterior surface of the abdominal wall. In order to prevent further effusion of the contents of the intestines, the patient was turned on his left side, and kept in that position until the bowel had been completely separated from its attachments, and four inches had been removed. The hæmorrhage was easily arrested, and the divided ends of the bowel were brought together and united by a modification of Lembert's suture. With the portion of intestine the tumour was entirely removed. As far as could be ascertained, none of the lymphatic glands were affected. The wound in the abdominal wall was now closed, and a drainage-tube was secured at each angle, and antiseptic dressing was applied. During the operation, which, with the dressing, occupied two hours, there was no collapse nor vomiting. The patient awoke from the narcosis half an hour after the operation was completed. During the first twelve hours the patient appeared to be doing well; but collapse then set in, and he died three hours afterwards, apparently from acute septicæmia. No *post mortem* examination was made.—Dr. Schede (Berlin) had performed resection of the descending colon in a case of papillary carcinoma. He placed a temporary ligature around the gut in order to prevent the escape of fæcal matter. He was unable to separate the mesentery so as to bring the divided ends of the bowel together, and had to make an artificial anus. The patient died next day.—Dr. Thiersch said that it was difficult to find the large intestine by median incision. He had proved this in a case in which the intestine was filled with gases and fæcal matters. His patient died.—In reply to a question from Dr. von Langenbeck, Dr. Gussenbauer said that he had modified Lembert's intestinal suture in such a way that not only was serous membrane united with serous membrane, but the two wound-surfaces of the intestine were resected together.—Dr. von Adelman reminded the meeting of a case in which Reybard of Paris some years ago performed incisions of intestine successfully; the patient living six or seven months.—Dr. von Langenbeck referred to a case in which Dieffenbach operated for the removal of gangrenous intestine. He asked Dr. Gussenbauer whether he considered the crucial incision always necessary?—Dr. Gussenbauer believed that a median incision was sufficient in simple cases where there was not much meteorism. In his own case, if he had simply made a median incision, it would have been necessary to draw all the intestines out of the wound in order to reach the diseased part; and the prolonged exposure to cold would have been a source of danger. Again, in consequence of the adhesion of the tumour to the small intestine, a simple incision would not have been sufficient.—Dr. Kocher (Bern), in a case of sloughing femoral hernia in a woman, excised a large piece of intestine. The ends of the intestine were brought together, and united in four weeks.—Dr. Czerny said that it was most important that, before proceeding to such operations, both the operator and his assistants should perform the experiment on animals. He advised that suture of the intestine should be done, by means of catgut, in two stages.

*Result of a Case of Stomatoplasty.*—Dr. Gussenbauer (Liège) reported the result of a case of plastic operation on the mouth described by him at the Congress of Surgeons in 1877. (See LONDON MEDICAL RECORD, 1877, page 206.) The flap of external skin that had been transplanted into the mouth had entirely assumed the character of mucous mem-

brane, the hairs having disappeared. A photographic portrait of the patient was exhibited.

*Spontaneous Subluxation of the Hand.*—Dr. Madelung (Bonn) spoke of a form of so-called spontaneous dislocation of the hand which had been described by some surgical writers. In it, without any injury or previous inflammation, the hand was displaced towards the palm from its connection with the bones of the forearm. These dislocations of the hand were not so rare as the scanty notices of them would indicate. Dr. Madelung shewed plaster-casts, illustrating strongly marked forms of the injury and its anatomical conditions. The lesion was met with in all stages, between the normal position of the hand with relation to the forearm and complete luxation. Most of the patients were females of the labouring classes, aged between 14 and 22. In rare cases, in which the lesions occurred later in life, there was a history of influences tending to disturb the nutrition of the parts (such as fracture, and inflammation of the sheaths of the tendons, treated by tight bandages). The most obvious subjective symptoms were pain in the wrist, often moderate but sometimes severe, and impairment of the functional activity of the part. Dr. Madelung would place this subluxation of the hand in the same category with flat foot, knock-knee, scoliosis, etc.; he regarded it as belonging to the group of disturbances of growth, which were more frequently met with in the spine and lower limbs than in the upper limbs.—Dr. von Langenbeck thought the lesion due to relaxation of the ligaments of the joint.—Dr. Hirschberg (Frankfort) had seen two cases of subluxation of the hand in young ladies who played much on the piano. This was in support of Dr. von Langenbeck's view. He asked Dr. Madelung as to the treatment.—Dr. Madelung divided patients with the milder forms of subluxation of the hand into three groups, according to their occupations. 1. Students who were much addicted to fencing. In them, the injury was developed first in the right hand, and, when this had become useless, in the left. 2. Young laundresses, especially those who had to work with stronger women who were accustomed to the work. 3. Young girls who played much on the piano. It was difficult to carry out treatment perseveringly till a complete cure was obtained. He used a plaster of Paris bandage, the hand being bent towards the palm. He had treated eight cases in this way; but in one only had a complete cure been effected.

#### IMPERIAL ROYAL MEDICAL SOCIETY OF VIENNA.

April 26, 1878. *Localisation of the Motor Functions of the Brain.*—Dr. Rosenthal described three cases of disease of the cortical matter of the brain which had occurred in the practice of Dr. Scholz, and one which had been placed at his disposal by Dr. N. Weiss.—In the first case, a tuberculous boy, aged 17, had for some months suffered from severe headache, giddiness, and vomiting. On examination, there was found to be, on the right side, paresis of the muscles of the face and of the upper limb, especially the extensors of the fingers and wrist and the interossei; electro-motor contractility and sensations were normal. From time to time painful twitches occurred: they began in the right hand and spread to the face, and were often followed by loss of consciousness. The right leg and the other side of the body remained free for some time, but, ■



few weeks before the patient's death, the left side became also affected with paroxysms of partial epilepsy. The partial convulsions of the right arm and right side of the face, which introduced and accompanied the paralytic attacks, the congestion discovered in the right eye on ophthalmoscopic examination, and the subsequent general distribution of the epileptiform twitchings, led to the diagnosis of a cerebral tumour, probably of tubercular character, lying near the surface of the brain. On *post mortem* examination, a cheesy swelling, about the size of a hen's egg, was found proceeding from the centre of the left anterior central convolution, and invading the gyrus frontalis medius; the motor ganglia were unaffected. This case supported Charcot's view, that the motor centre for the arm lay in the middle third of the anterior central convolution. The subject of the second case was a man aged 69, suffering from emphysema and hypertrophy of the heart. He was seized with paralysis of the tongue, which lay motionless on the floor of his mouth, so that deglutition was much impeded. There was no paralysis of the limbs: the patient could make himself understood by means of writing. The necropsy detected foci of so-called cell-infiltration on the right side, in the grey and adjacent white matter of the lower end of the anterior central convolution and the posterior end of the lowest frontal convolution; the same part of the left cerebral hemisphere was affected, and also the posterior part of the middle frontal convolution. Most of the muscular fibres of the tongue had undergone fatty degeneration; the hypoglossal nerves were unchanged. According to this case, the lowest frontal convolution and its neighbourhood were the centre for the movements of the tongue, as was also shown by Ferrier's experiments on monkeys. In the third case the subject was a labourer, aged 46, who in 1847 was struck by a falling beam, about an inch and a half above the right eyebrow, beside the frontal protuberance. He lost consciousness for a short time, but very soon recovered; both speech and the motor power of the limbs were said to have been entirely unaffected. There was much suppuration, and, fourteen days after the injury, a portion of bone was removed by the trephine. On his admission to hospital at the end of last year, there was, in the above-mentioned situation, a soft pulsating tumour, surrounded by sharp bony edges; on forcible inspiration it sank in like a funnel, on forcible expiration it was enlarged to the size of a nut. On auscultation over it during compression of the carotid, a blowing sound was heard. As the frontal protuberance nearly corresponded to the anterior part of the first and second frontal convolutions, it was assumed that these were the seat of the lesion which had produced no symptoms. The patient died of chronic tuberculosis; and at the necropsy there was found over the left orbit a triradiate cicatrix, under which was an opening in the frontal bone,  $1\frac{1}{2}$  inch in diameter—the bone being entirely absent. The corresponding dura mater and inner membranes were thickened, and bounded a cavity as large as a walnut, filled with clear serum, which lay between the meninges and a loss of substance in the brain. This loss of substance comprised a circular portion of the convex surface of the left frontal lobe, about 1.2 inches in diameter, and consisting of the grey and white substance of the inferior frontal convolution. There was also tubercle of the lungs and kidneys. In the fourth case, a woman aged 38 had suffered for three-fourths of a year from intermittent pain in the occi-

pital region, passing to the left shoulder and arm, transient muscular twitchings, tenderness on pressure over the occiput and upper cervical vertebræ, and frequent nausea. The intellect and aspect were normal; the arms and legs could be moved easily; sensation was impaired on the left side. She died with cyanosis and dyspnoea; and at the necropsy there was found a swelling (psammoma) of the dura mater as large as a goose's egg, proceeding from the posterior end of the right surface of the greater falci-form process, and penetrating between the convolutions of the right occipital lobe. There were also cedema of the spinal cord, emphysema of the lungs, and obsolete tuberculosis of the apex.

*Narrowing of the Larynx.*—Dr. Schrötter showed a patient on whom laryngotomy had been performed in 1876 on account of an injury of the neck. He afterwards came to Vienna in consequence of not being able to speak distinctly. On laryngoscopic examination, Dr. Schrötter found that the lumen of the larynx was completely obstructed. After several attempts, he succeeded in passing an instrument like a harpoon beyond the obstruction, and drawing a silken thread through. After a short time, dilatation was commenced by means of metallic bougies, gradually increasing in size. The patient's speech was now hoarse, but intelligible.

*The Blood-vessels of the Eyelids.*—Dr. Langer said that the firm homogenous tarsus did not reach to the margin of the lid, but only as far as the anterior arch of the tarsus; and that the posterior layers of its substance formed a kind of septum between the capillaries of the conjunctiva and the vessels of the tarsal glands. The vessels of the conjunctiva tarsi must, therefore, run along its upper and lower borders, while the tarsal glands might be said to obtain their vessels almost entirely and directly from the anterior part. Both sets of vessels were connected by a few fine tubes penetrating the tarsus, but the connections were so few that the conjunctiva tarsi and the tarsal glands might each be said to possess special vessels. The anastomoses multiplied towards the edges of the tarsus, and beyond the edges the sets of vessels were completely fused together. It was further demonstrated that on the capillaries of the conjunctiva tarsi there were dilatations like little aneurisms, such as those found in the capillaries of the frog's palate. The terminal arteries gradually gave off small twigs and formed a network, while the rootlets of the veins formed short trunks into which the tubes of the network entered; so that, when these roots of the veins and only the small capillary region lying nearest to them were filled, the distribution of the vessels had a stellate appearance. The granular lymphoid infiltrations of the cornea were found around these venous roots, so that the portion of the network raised by the infiltration formed a kind of basket around the adenoid granule. Regarding the transition of the skin into the conjunctival tissue, Dr. Langer said that it took place in the same way as the passage of the skin into mucous membrane on the lips: viz., in two zones, the first being that of the surface of the border of the eyelid, where there were larger scattered papillæ than on the skin; the second lying within the margin of the lid, and having single papillæ, quite embedded in the thickened epithelium. These papillæ were arranged in rows of from five to seven, placed perpendicularly to the margin of the lid. Their number diminished towards the canthus.—Dr. von Arlt had observed that in trachoma the so-called trachoma-granules were most frequently found on

the border of the lid, and had suspected that this was connected with the distribution of the vessels. Dr. Langer's researches had converted this supposition into a fact.

May 10. *Influence of the Movements of the Head on the Perception of Sound.*—In a communication on this subject, Dr. Urbantschitsch said that the influence of movements of the head on the perception of sound was undoubted. Their capability of modifying the character of tones was explained by Mach to depend on the altered position of the muscles of the ear with respect to the source of sound. This explanation is, however, the author said, insufficient; for, when during a noise the whole body is turned, and the relation of the ear-muscles to the source of sound is altered, there is indeed a change in the perception of sound; but it is more evident if the head alone be moved. When the head is bent down the sound is much weaker, when the head is raised it is stronger. This change also takes place when the palato-pharyngeal muscles are voluntarily contracted, the ear-muscles at the same time remaining perfectly at rest. Hence it is probable that in flexion of the head there is a change in the tension of the palato-pharyngeal muscles, and the question arises, whether movement of the head produces changes in the motor apparatus of the Eustachian tube. It is alleged by some authors that strong flexion of the head forwards produces a narrowing of the pharyngeal orifice of the Eustachian tube; and that, when the head is bent to one side, air blown on that side passes more readily into the Eustachian tube of the other side; also that in voluntary contraction of the palato-pharyngeal muscles air passes more readily into the tympanic cavity. Schwarze observed a crackling sound in a patient during movement of the head. This crackling, which Fabricius and J. Müller believed to be due to a contraction of the tensor tympani muscle, is explained by Politzer by tension of the anterior muscles, while the anterior lip of the Eustachian tube is drawn away from the posterior. Bock has observed, in a patient, rhythmic contractions of the palato-pharyngeal muscles isochronous with the pulse. These observations show that movements of the head are attended with changes in the tension of the muscles of the Eustachian tube. Tröltzsch has shown that the tensor veli palati is connected with the tensor tympani, so that contraction of the one must bring about contraction of the other. When the tensor tympani contracts, the stapes is pressed more deeply towards the labyrinth, and in consequence of this the pressure within the ear must be increased. This increase of pressure may be followed by impaired hearing and by deafness; and Politzer has also ascribed the diminished hearing during yawning to the simultaneous movement of the tensor tympani—a view with which Helmholtz agrees. From the fact that flexion of the head produces tension of the tensor palati and tensor tympani, and therewith a change in the perception of sound, it follows that this change cannot occur in individuals in whom the function of the tensor tympani is impaired. This assumption has been entirely confirmed by observations on persons who were the subjects of luxation of the vesicles of the ear, or in whom the tensor tympani was disconnected from the handle of the malleus.

*Determination of the Heart's Action by Palpation.*

—Dr. Isidor Hein read a paper on this subject. The author's leading idea was that each change felt by the palpating finger corresponds with a change in the percussion-sound, as both are dependent on

the same factors; and that also certain vibratory changes correspond to the tactile sensations. The vibratory power of bodies is tested by touch, and by palpation the heart's limits can be sufficiently well defined, which cannot be done by palpation; an impulse, though so weak as not to produce a sound, becomes under palpation a valuable sign. The author expressed the belief that his method of examination was likely to be of great use in medicine.

May 17. *Ossification of the Entire Muscular System.*—Dr. Nicoladoni showed a girl aged 7, the subject of this rare affection. It had begun to appear during her first year; it first attacked the muscles of the neck, and then passed on to those of the back. He said that in such cases there is evidently a necrosis of the contractile substance, which is pressed as by the diseased products of the perimysium. In the present case there were two hard bands, corresponding to the sacro-lumbalis muscle. The scapula appeared to be immovably fixed to the chest by ossification of its muscles. In the upper part of the biceps flexor cubiti were felt small scattered bony plates, while the tendon appeared to be changed into a hard fibrous cord. The same was the case with the sterno-cleido-mastoid muscle. The semitendinosus and semimembranosus muscles presented hard protrusions. The pectoral muscle was also ossified; the axillæ were bounded both in front and behind by stiff walls; and even the muscular apparatus of the lower jaw was attacked. As a necessary result, the child was extremely helpless, all movements being interfered with.

*Changes of Matter in Febrile Diseases.*—Dr. Wertheim gave an account of researches which he had made in conjunction with Drs. A. Lichtfuss and H. Svetinich. His apparatus was constructed on the model of that used by Pettenkofer and Voit for physiological experiments. The following were the results at which he had arrived after prolonged and troublesome research. 1. The change of matter, in relation to quantity and weight, is less in febrile patients than in healthy persons. During fever, the organism loses to a remarkable degree the power of absorbing oxygen from the air and eliminating carbonic acid. 2. Convalescents require a considerable time to regain the normal condition of absorption and elimination; for example, from four to six weeks after scarlet fever, etc. The rise of temperature is not due to increased combustion, but to retention of heat in the body.

*Urological Communications.*—Dr. Dittel read a paper under this title. He first spoke of an operative proceeding, which he had already described as having been successfully performed—separation (*Ab-lösung*) of the rectum. The patient was a lad from Constantinople, aged 16, who had had typhus (typhoid fever?) eight years previously. During convalescence, retention of urine suddenly set in, and the catheter was used. This was said to have been attended with much hæmorrhage. After some days, it was observed that in micturition the urine escaped also *per anum*, indicating that there was a communication between the urethra and rectum. Since this time, according to the statement of the family medical attendant, it had not been possible to introduce an instrument into the bladder, and there had been vesical catarrh and irregularity in defæcation; diarrhœa alternating with constipation. On examination, Dr. Dittel found a depression on the anterior wall of the rectum above the sphincter. When this was covered with the finger, during urina-



tion, no urine escaped by the rectum. It was then the end of a fistula, which was not a very narrow one, as a considerable quantity of urine escaped by the rectum; and, as no pus escaped, it must have become cicatrised. Dr. Dittel introduced a catheter into the bladder, and succeeded, by passing a sound *per rectum*, in tracing the course of the fistula up to the catheter. A semilunar incision having been made in front of the sphincter, the rectum was separated from the end of the prostate, and the cicatricial fistulous cord was cut through. In this way both the openings of the fistula were exposed. The opening into the rectum was closed with catgut sutures, that into the urethra was touched with caustic, and a drainage-tube was applied. Parenchymous hæmorrhage took place on the fifth day after the operation, and the healing by primary intention failed. The result was, however, satisfactory, the patient being cured in three weeks. Dr. Dittel had followed a modification of this method in four cases of lithotomy. He regarded it as suitable for cases in which lithotomy cannot be performed, in consequence of hardness of the calculus or of the presence of stricture, and where, as in old persons, hæmorrhage is to be avoided. Dr. Dittel had further endeavoured to perform the operation by the galvanic cautery; a needle being passed from the left side to the middle of the perinæum, a platinum wire was applied, and both needle and wire were drawn out towards the right. In a later case, this method was simplified by the use of Paquelin's thermic cautery. The last patient operated on in this way was a man aged 45. In 1861, he underwent lithotomy, but left the hospital before he was quite cured. Small fragments were left, and a new calculus was formed on them. From 1877, he had suffered from urinary troubles. On examination, there was found immediately beyond the membranous portion a calculus which completely occupied the prostate. On rectal examination, friction was perceived, indicating the presence of several calculi. Lithotomy was impossible, as the urethra did not allow room for the passage and opening of the instrument. Separation of the rectum was therefore performed by means of Paquelin's cautery; a transverse incision was made into the prostate itself, the stone was removed, and a drainage-tube was applied to the wound in the perinæum. The patient's condition before the operation was very unfavourable. He already complained of pain on both thighs. On the fifth day after the operation there was abundant purulent infiltration in those parts. He had lymphangitis; rigors set in on the twelfth day, and death followed on the eighteenth. The necropsy showed advanced atrophy of both kidneys, hydronephrosis, ichorous cysto-pyelitis, and metastatic pneumonia. The neighbourhood of the wound showed, however, no morbid reaction; there was no pericystitis. The great advantage of the operation consists in this, that it allows the operator a full view of the space between the bladder and rectum, and facilitates operation; that the discharge escapes freely from the wound; that the latter is well drained; and that the whole course of healing can be followed out with certainty. Dr. Dittel further called attention to the occurrence and diagnosis of the so-called "pipe-stones" (pfeifensteine)—*i.e.*, calculi in which a small projection is placed at the end of a neck, which latter is embraced by the sphincter vesicæ. As, when the latter surrounds a foreign body, the closure of the bladder is interfered with, there must of necessity be stillicidium urinæ. This form of stone is not formed in this shape in the

bladder in such a way that the projection grows in the urethra, for, as Dr. Dittel had found in the last mentioned patient, renal calculi may have the processes. When such renal calculi have entered the bladder, the projecting neck is carried into the urethra and is detained there, while the remainder of the stone, remaining in the bladder, undergoes increase by the addition of new layers.

May 24. *Osteoma of the Trachea*.—Dr. Chiari showed a specimen of osteoma of the trachea, taken from a woman aged 25, who had died of acute tuberculosis. In the anterior wall of the trachea, between the innermost layer of the mucous membrane and the tracheal cartilage, was a bony structure, which on close examination was found to be an osteoma. The substance constituting the new growth presented true bone with medullary spaces. It had the form of a lamina 4 centimètres (1.6 inch) long, 3 centimètres (1.2 inch) wide, and 3 or 4 millimètres (.16 to .12 inch thick). At the lower part of the trachea, and in the right and left bronchi of the first order, there was small lamellæ and some miliary bony deposits; while nothing of the kind was to be found in the upper portion of the larynx as far as the trachea. This was a case of heteroplastic osteoma, the new growth not being the effect of inflammatory processes, and occurring where, in the normal condition, bone is never found. These heteroplastic osteomata are very rare; putting aside the osteomata of the dura mater and in the eye, which are referable to inflammatory processes, they are found only in the lungs and in the skin. Dr. Chiari could find only one other case of osteoma of the trachea described.

*Excrescences from the Walls of the Cerebral Ventricles*.—Dr. J. Weiss described the normal condition of the walls of the cerebral ventricles. He said that his researches had shown him that in animals and in man, both in the fresh state and after lying in chromic acid for some days, ciliated epithelium is distinctly present. The epithelial cells always presented a well defined form, and consisted below of a single or branched process, while above was a column bearing the cilia. There was a regular variation in the height of the cells in different situations: the cells of the fourth ventricle appeared higher than those of other parts, *e.g.*, in the lateral ventricle. The ependyma showed in prepared sections an intensely coloured layer beneath the epithelium, limited towards the nerve-substance by horizontally coursing vessels; there were no vessels in the ependyma itself. The outgrowths from the walls of the cerebral ventricles are no way connected with hydrocephalus or with its concomitant processes: considerable outgrowths are found without increase of the ventricular fluid, and *vice versa*. The excrescences consist of the same tissue as the ependyma. According to Rindfleisch, they never contain vessels. Dr. Weiss gives the following account of their microscopic appearance. In the early stages, there was, next to the epithelium, a thick layer of round cells, often of remarkable size; later on, these round cells were seen to give off processes; they gradually lost their round form, and in a later stage were transformed into distinct elongated connective tissue cells, and a reticulated structure was formed, which constantly became closer, so that at last it presented the appearance of true connective tissue with interspersed elongated nuclei. Epithelium-cells derived from the surface were found within the growth in nearly all the preparations. With regard to the manner in which these epithelium-cells came to be

deeply placed, Dr. Weiss assumed that the epithelium of the surface became involved or surrounded by the union of two excrescences; while, in consequence of this union, the epithelium of the interior presented double rows, there were also other roundish or long cellular elements, resembling the course of a vessel, in parts where no vessels existed. They perhaps occupied lymph-canals. The vessels are often enclosed by a broad ring of such cellular elements; they are Deiters' cells. In conclusion, Dr. Weiss remarked that the excrescences were not, as Rindfleisch supposed, surrounded with vessels, but that newly formed vessels reached as far as their upper surface.

## REVIEWS.

*On Consumption, and on certain Diseases of the Lungs and Pleura.* By R. DOUGLAS POWELL, M.D., F.R.C.P., Physician to the Hospital for Consumption and Diseases of the Chest at Brompton. London: H. K. Lewis, 1878.

This volume is a revised and extended reprint of the author's previous work on *The Varieties of Pulmonary Consumption*, published six years ago; the chief additions being special chapters on Pulmonary Cavities, Pneumothorax, Tubercular Ulceration of the Bowels, Tubercular Meningitis, and Spurious Hæmoptysis, as well as chapters on Bronchitis, Pneumonia, Emphysema, Pleuritis, and Pleuritic Effusions. A second volume is announced, which will be principally devoted to the Diseases of the Heart and Great Vessels in the thorax, but will also contain chapters on cancer of the lungs and pleura, and tumours of the mediastinum. In these two volumes, Dr. Powell evidently intends to present us with a tolerably complete treatise upon diseases of the chest. We are not at all sure that in striving to make their books more or less complete treatises, authors do not really detract from their value. Systematic works on practice of medicine, as class-books, for the use of students and young practitioners, as the advertisements have it, there must be; but it is the very merit of such books to be destitute of originality. Their value is just in proportion to the fidelity with which they present the most approved current knowledge in the plainest possible manner, avoiding all *questiones vexatæ*, and unencumbered by clinical references, except in short pithy notes for the purpose of enforcing particular doctrines. The only other legitimate kind of medical book is that in which the author brings forward new views and new facts, placing on record his own proper experiences to elucidate hitherto obscure questions in theory or practice, with the object of sharing with others that clinical knowledge which his special opportunities for observation have enabled him to acquire. The basis for the present volumes appears to have been the various contributions made by the author from time to time to various medical societies, and these have been expanded by arranging the matters to be discussed in systematic form, so as to make a book; yet, if this be a fault, Dr. Powell has many companions in crime, so it is, perhaps, fairer to judge him by the way in which he has accomplished his task.

In his introductory remarks he says, "Much as has been written upon the subject of pulmonary phthisis in all its aspects, it cannot be denied that there are still many questions concerning it upon

which professional opinion remains undecided, and many of which are of the highest importance." Some of these are, he says, the varieties of phthisis, the value of hæmoptysis as a sign of actually existing pulmonary disease, the significance of diarrhoea or laryngitis with reference to the supervention of tuberculosis, finally, the nature of the *processus morbi* of pulmonary phthisis; and he leads us to hope, although he does not specially promise, that by the careful perusal of his pages we shall find some solution of these knotty problems, but we find they are precisely the points upon which Dr. Powell is vague and diffuse, treating us first to the views on one side and then on the other, and leaving us pretty much where we were at the outset. We only find him emphasising such comparatively unimportant matters as the amount of pressure exercised by pleuritic effusion, and the mechanism of displacement of the thoracic organs. Pulmonary phthisis is a profoundly interesting disease from its social, pathological, and clinical aspects; there is, therefore, no chapter in this book which does not give material for much reflection, and we should far exceed our space if we attempted to deal critically with each division of the subject. Dr. Powell describes catarrhal pneumonic phthisis, fibroid phthisis, and hæmorrhagic phthisis; but he seems to us to fail altogether in showing good reason for this classification, for fibroid phthisis, according to him, is catarrhal pneumonic phthisis *plus* more or less interstitial fibrosis, and hæmorrhagic phthisis simply means catarrhal pneumonic phthisis, which was preceded by hæmoptysis. In his own words, "The onset of the disease was with copious hæmoptysis in a person previously with no apparent disease," and (he does not say how) "we are further certain that a considerable amount of the disease present is the result of hæmoptysis." This inconsistency arises from a confusion of pathological and clinical terminology and classification, and from the too hasty attempt to systematise upon narrow grounds. The presence of fibrosis does not exclude the danger of acute tuberculosis, and *per se*, we believe, is of no value for prognosis.

Dr. Powell scarcely recognises the form of fibroid lung called by pathologists "cirrhosis of the lung", and which certainly does present very characteristic clinical features. Further on he describes chronic and acute *tuberculo-pneumonic* phthisis, by which he means the chronic and acute supervention of tubercle upon the pneumonic process. But we should like to ask, would Dr. Powell venture in any case of chronic phthisis to assert the absence of miliary granulations from the physical signs and symptoms? Have we any knowledge of the true pathological value of such granulations supervening in a chronic manner upon the pneumonic process? Modern investigators have gone so far as to deny any structural differences between them and the coarser lesions with which they are associated except differences of size. Dr. Powell believes that tubercle does possess a definite histological structure, following Dr. Burdon Sanderson's view of its adenoid relationships; and he may be predisposed to believe in corresponding peculiarities in the signs and symptoms attending its deposit: but, speaking of chronic tuberculosis only, we, having no such histological bases for our faith, are sceptical of any precise clinical evidence of the presence of granulations around the phthisical products. Admitting that the cure of phthisis may be beyond our skill, the present data for prognosis as to the duration of life might be much more precise than they are. We should like to know



whether there is any truth in the belief that the co-existence of mitral disease exerts a retarding influence on the pulmonary changes? We believe that most practitioners seeing a case in which they have found signs of more or less pulmonary disease indicated by impaired percussion, altered respiration, morbid accompaniments, etc., form their opinion of the gravity of the case from the symptoms and not from the physical signs, namely, from the progressive emaciation, hectic, exhaustion, and anæmia of the patient; just as in aortic or mitral valvular lesions we estimate their present importance by the indications of greater or less disturbance of the pulmonary and systemic circulations, and it seems to us that it is from this point of view that we want more information. We see patients with marked physical signs, but, except some cough and expectoration, in fair general health; we want to know what are the probabilities with regard to such cases. We are told, and we all try to believe, that some cases recover, but younger men would feel very much safer if physicians with large practices would publish notes of a hundred or two of such cases in a tabulated form, giving the duration and results. The same may be said of hæmoptysis without physical signs in the thorax, and with signs of catarrh of the apex. Is there any sound basis for a favourable prognosis in any case of phthisis, or is it not the custom to tell the friends that it is a case of consumption, and, leaving them to fear the worst, trust that by chance the patient may get better, and the physician get the credit?

In the matter of treatment, Dr. Powell is not very full. He does not speak enough of treating the symptoms, the night-sweats, the exhausting cough, diarrhoea, dyspepsia, etc. To the practitioner, unfortunately, in most cases the judicious treatment of symptoms is the only thing he finds in his power, and his reputation depends upon their careful management. The question of climate, again, is scarcely discussed, except in reference to bronchitis and emphysema, where Dr. Powell's fondness for physics leads him to discuss the effects of high and low atmospheric pressures upon the mechanism of respiration. But it is from metropolitan specialists, who see large numbers of well-to-do invalids able to seek prolongation of life in the various health resorts, that the general body of the profession looks for information as to the result of their experience. It cannot be an indifferent thing whether we send a patient to the mild, moist, enervating climate of Madeira, or to the dry heat of Africa, or round the Cape to endure the variations of torrid and frigid zones in a voyage to Australia. We confess to some disappointment with the book, but it gives a faithful general account of the subjects of which it treats; and, as a systematic work, it deserves a place amongst current medical literature.

*Ems et Royat. Parallèle. Par le Dr. LABAT. 8vo, pp. 39. Paris: Baillière, 1878.*

*Notice Médicale sur les Eaux Thermales de La Bourboule. Par le Dr. E. ESCOT. 8vo, pp. 38. Clermont-Ferrand, 1876.*

The volcanic districts of Auvergne and of the lower Rhine agree with each other in furnishing either within their boundaries, or very close to them, an abundance of springs, containing as their speciality carbonate of soda, and much carbonic acid.

They yield both light acidulous table-drinks, and waters more strongly charged with carbonate of soda.

Certain points of analogy between mineral stations have been pointed out, as between Royat and Ems, and Dr. Labat has written a comparison of the two with much judgment. He is not merely one of those Frenchmen who, since the war, have wished to dispense entirely with German waters, but one who has in successive years visited systematically the baths of Europe, and has judged for himself. His visits have even included England, Scandinavia, and Spain, countries almost wholly unknown to Continental balneologists. Royat has put forth special claims, since it was discovered a year or two ago that one of its wells contains as much lithium as the strongest well of the sort at Baden Baden. But Dr. Labat does not make much of this, doubting very reasonably, first, whether lithium is present in such quantity as to make it an agent of much importance, and secondly, doubting whether the salts of lithium are really of much practical value in medicine.

Proceeding to compare the two stations, we find that Ems is a very much larger place than Royat, and lies on the alluvial plain along the banks of a sluggish river, and is very much shut in by hills. Royat is in a narrower yet less enclosed valley, with little alluvial soil, through which a small stream runs. The air of Ems is apt to be muggy and relaxing, that of Royat is drier and more tonic. The waters of Ems contain most soda; those of Royat most chloride of sodium. The cases which are specially sent to Ems, those of chronic laryngitis, and of threatened phthisis, are not so much the subject of treatment at Royat. They are oftener sent on to Mont Dore. Nor are the complaints of women so much a matter of speciality at Royat as at Ems, although it is considered that, owing to the presence of more salt and of some iron, the waters of Royat are at least as good in anæmia. At Royat they treat a good deal of gout, also neuralgiæ connected with anæmia, and consider that eczematæ and other cutaneous affections having an arthritic basis are good subjects for treatment.

Royat's establishments are growing every day, although they can scarcely yet compete with the extensive arrangements of a place of old reputation like Ems. But if Royat and another mineral water station in the same district, St. Nectaire, are making rapid progress, they have scarcely attracted so much attention as La Bourboule. The waters of that place are very strongly mineralised, and contain much more carbonate of soda and chloride of sodium than those of Royat, and still more than the comparatively weakly mineralised springs of Mont Dore. It is the quantity of arsenic present in the water that has attracted so much notice. There has been much jealousy between Mont Dore and La Bourboule, and although the water of the latter place contains about fifteen times as much arsenic as that of the former, the physicians of the former have gravely argued that the treatment at Mont Dore is in reality arsenical, the small amount of mineralisation of its waters not interfering with the action of the minute quantity of arsenic present, while they consider that the mineralisation of the waters of La Bourboule is so strong that it neutralises the action of the large quantity of arsenic that is present. To this day the quantity of arsenic present in the different springs of La Bourboule is matter of dispute, but the recent report of the Academy of Medicine assigns only 28

milligrammes of arseniate of soda in the litre to the two strongest springs.

However this may be, La Bourboule has become a most popular station in France for cutaneous affections, for scrofula and diseases of the joints, for the cure of tropical and rebellious intermittents, and lately it has been competing with Mont Dore in the cure of asthmas, of capillary bronchitis with emphysema, and even of phthisis. There is no question that the action of so highly mineralised waters must be powerful. The altitude of the station, little short of 3,000 feet, should not be forgotten. It is only about 600 feet lower than Mont Dore.

J. MACPHERSON, M.D.

*Die Heilkräfte der sogenannten Indifferenten Thermen*, etc. Von Dr. WILH. THEODOR. von RENZ, Allgemeiner Theil. 8vo, pp. 96. Tübingen, 1878.

The object of Dr. Renz is to explain the theory of the operation of almost chemically pure thermal waters, and this he endeavours to do in a series of half-conversational lectures to medical men. He says that the modern school proclaims that the action of mineral waters is a mere question of temperature and of chemical composition. To this he demurs.

Although chemists have discovered but a very small amount of mineralisation in the Wildbad waters, it is beyond all doubt that their action is very different from that of common water raised to the same temperature.

Our bodies are more than mere thermometers; they have the feeling of what is refreshing and pleasant, which cannot be tested by measurement, and the susceptibility of such feelings varies in individuals. We can only enumerate some of the ideas that our author throws out to account for this, and for our imperfect knowledge of the subject.

We know little as yet of the thermo-electric action of water. The chemical examination of water is still imperfect. Chemistry has never detected sulphuretted hydrogen which yet is certainly generated in the Wildbad waters. The comparative spectral analysis of ordinary and of mineral waters has been made but very incompletely. We know little of the changes of molecular constitution which may take place, when solutions are effected at enormous depths and under immense pressure.

Dr. Renz thinks that in the Wildbad waters the full quantity of soda present has acquired a potentiated action different from that of ordinary soda, as ozone differs from oxygen, and that this may account for its action on the skin. He is satisfied that when the body is immersed for some time in the Wildbad waters, a considerable portion of the bubbles which appear on the skin is formed by extrication of carbonic acid gas from the body. He also points out at length that the vapour of the waters is an important element in their action, and he has made experiments which show that the pulse and respiration are much more affected by the vapour in those who are freshly exposed to it, than in the bath attendants, who are accustomed to it. He also calls into his aid the analogy of the action of infinitesimal doses, as, for instance, of certain scents.

Although there is a certain amount of haziness, and a great want of definiteness in what Dr. Renz propounds, still the subject is well deserving of study, and some of his hints may prove valuable. He has evidently long thought over the whole question, and

is well acquainted with the old literature of the subject. In the next portion of his work we hope that he will take up the practical portion—that is, the absolute operation of the waters in the cure of disease.

J. MACPHERSON, M.D.

## NEW INVENTIONS.

### NEW MEDICINAL PREPARATIONS.

Messrs. Gale and Co., Wholesale Chemists, 15, Bouverie Street, Fleet Street, have forwarded us the following preparations.

Emulsion of cod-liver oil.

- |   |                              |
|---|------------------------------|
| " | with lactophosphate of lime. |
| " | " hypophosphate of lime.     |
| " | " phosphorus.                |
| " | " quinine.                   |
| " | " " and phosphorus.          |

Together with a sample of the cod-liver oil from which these emulsions are prepared. The oil is of unusually pale colour, nearly devoid of fishy odour, showing much care in its preparation. We have tried all these preparations in suitable cases of disease, and have noted the results. To give one instance, a child of 20 months, emaciated so as to weigh only 12 lbs., took a dessertspoonful of the lactophosphate three times a day, alternately with a teaspoonful of Parrish's food. At the end of the first week, the weight had increased to 14 lbs., at the second to upwards of 16 lbs., and, at the end of the third, to upwards of 18 lbs., which is only 2 lbs. below the average weight of a child of this age. Treatment was then discontinued. The other preparations were mainly given to children affected with strumous ophthalmia. One point was especially noted, and that was, the readiness with which they were taken by our little patients, due, doubtless, to the almond flavouring, etc.

We can speak confidently as to the value of these several preparations as therapeutic and dietetic agents in the treatment of diseased actions arising from deficiency of power, or emaciation following exhausting affections.

### CHAPMAN AND CO.'S KOUMISS.

Since koumiss was brought permanently under professional notice some years ago, the experience of many medical men in this country has tended to establish its value as a dietetic and therapeutic agent. Our readers will find a series of references to articles on the subject in the LONDON MEDICAL RECORD for May, page 212.

On the manufacture of koumiss, great care has been bestowed by Messrs. Chapman and Co. of Duke Street, Portland Place, and their preparations have met with much approbation. While, however, the traditional source of koumiss in the east of Europe and in some parts of Asia is mare's milk, Messrs. Chapman prepare their koumiss from cow's milk, which is subjected to a process of double fermentation.

The koumiss thus prepared contains, besides finely divided casein, lactic acid, carbonic acid, and alcohol, with a small quantity of associated fragrant matters. Koumiss is prepared in five different modifications of consistence. They are distinguished as—



A. *Full koumiss*, containing the maximum of casein.

B. *Medium koumiss*—the substitute for ass's or mare's milk koumiss—containing more lactose and phosphates, with less casein, than A.

C. *Whey koumiss*, free from casein, for fever-patients and persons of full habit.

D. *Diabetic koumiss*, with or without glycerine.

E. *Sparkling bland*, most pleasant, but least nourishing.

These varieties are further divided into three states or periods, which refer only to the *age* of koumiss, and are distinguished by the numbers 1, 2, and 3. No. 1 is the new or freshest koumiss, slightly sparkling and sweetly acidulous. It has a mildly aperient action. In five or six days it loses its special properties, and changes gradually into No. 2; therefore, it must be ordered fresh as wanted, and two days in advance. No. 2 is more sparkling than No. 1; it has neither an aperient nor constipating action; as a beverage at meals it is a valuable aid to digestion. This kind will retain its special properties for two weeks, after which, it becomes No. 3, and, therefore, orders for it must be timed accordingly.

No. 3 koumiss contains the greater amount of lactic acid, carbonic acid, and alcohol, and is, therefore, more acid and pungent. Its astringent properties are said to be great. This will keep for about three months if kept cool.

*Koumiss extract* is sold in blue flacons of  $3\frac{1}{2}$  oz. capacity; when mixed with one quart champagne bottle of fresh milk, A. No. 1 koumiss will be obtained, which will be ready for drinking within twelve hours, if kept in a place over  $80^{\circ}$  Fahr. The koumiss extract will keep for an indefinite period if kept in a cool place, and will give with milk an excellent substitute for sparkling koumiss.

Another drink prepared by the fermentation of milk, made by Messrs. Chapman, is *sparkling bland*.

To those members of the profession who desire to test the value of koumiss, we can recommend Messrs. Chapman's preparations as carefully made and reliable.

## MISCELLANY.

THE rank of Major-General has been conferred on Professor von Langenbeck, of Berlin.

DR. BARTELS, Professor of Medicine in the University of Kiel, died on June 20.

DR. GUSSEROW, of Strasburg, has accepted an invitation to a Professorship of Obstetrics and Gynæcology in the University of Berlin. Dr. Hegar, of Freiburg, is nominated as his successor in the University of Strasburg.

UNIVERSITY OF BERLIN.—The number of students in this university during the summer session, 1878, has been 2,569. During the summer of 1877 the number was 2,237; and in the summer of 1876 it was 1,977. The numbers of medical students in the university has been—winter session, 1876-77, 281; summer session, 1877, 297; winter, 1877-78, 345; summer, 1878, 346. Of these, 283 are Prussians, and 25 belong to other German states, including Austria.

AN OPHTHALMOLOGICAL CONGRESS is to be held in Naples, from September 1 to 5.

THE AMERICAN MEDICAL ASSOCIATION.—The twenty-ninth annual meeting of this Association was held in Buffalo, New York, on June 4 and three following days, under the presidency of Dr. T. G. Richardson. In his

address, after speaking of the usefulness of the association of professional men from all sections for an expression and interchange of opinion, and the influence they were capable of wielding in their collective capacity, the president referred in terms of gratification to the recent evidences of a general desire in the profession for an elevation of the standard of medical education, and noticed the action of Harvard Medical School, the Chicago Medical College, and more recently of the University of Pennsylvania, in lengthening the term of study and adopting a graded course, as one of the most encouraging indications of the growth of a healthy popular sentiment. This reformation he believed to be due to the growth of professional interest in the subject, and to a better general appreciation of the relationship and responsibility of the medical colleges to the profession. This revolution which is taking place in the minds of medical teachers is almost entirely due to the public professional opinion which has been originated by the frequent discussions before this body. In order to increase this influence a more thorough organisation of the state, county, and district societies, by which the sixty thousand physicians of the United States may be brought into vital connection with the American Medical Association, is eminently desirable, and a plan to further this end deserves immediate consideration. In order to stimulate original investigation, the president urged that the association should offer annual prizes of not less than two hundred and fifty dollars each for strictly original contributions to medical or surgical progress. He referred to the labours of the members in behalf of state medicine since ten years ago. At that time not a single state health association existed; now there are twenty of them organised and working. He declared that the scope of state medicine, in brief, may be considered as including public hygiene, medical education and medical jurisprudence, and the control and sustentation of public institutions for the sick and infirm. With such an extended field, it is remarkable that the preparation of medical officers for this work is almost totally neglected by our institutions of learning, in view of the fact that such deplorable ignorance prevails in the community in regard to sanitary law. Since the hope of progress in state medicine lies in the education of the people, it was recommended to publish an address showing the importance of the subject, copies of which should be sent to the state medical societies for distribution. The establishment by the national Congress of a national council of health was strongly advocated, whose chief officer should be a member of the Cabinet of the United States. Dr. Richardson also recommended that the state medical societies continue their endeavours to establish boards of health; and, finally, that the American Medical Association should be incorporated.—Upon motion of Professor Gross, a committee, consisting of the president and four of his immediate predecessors, was appointed to consider the recommendations contained in the address in reference to medical education, prize essays, state medicine, and hygiene.—It was decided to hold the next annual meeting in Atlanta, Georgia, in the first week of May 1879; and Dr. Theophilus Parvin of Indiana was appointed President-Elect.

A NEW AND VALUABLE ENGLISH MINERAL WATER.—Mr. C. E. De Rana, in a paper on *The Secondary Rocks of England as a Source of Water Supply*, refers to a description by Professor Prestwich in a communication to the Ashendean Society of Oxford, of the mineral water of St. Clement's, Oxford. This water is now issuing from an artesian bore-hole carried 420 feet through the Oxford clay and oolitic strata in 1832. An analysis made by Mr. Donkin proves this water to contain 1,277 grains per gallon, a quantity not exceeded by many of the Continental saline waters. In the large proportion of sulphates, this water most nearly resembles some of the German mineral waters, such as Freiderichsall and Rehme, than those of England; for that of Cheltenham only contains 694 grains of saline ingredients, of which 104 grains per gallon consist of sulphate of soda, which at St. Clement's amounts to 357 grains.

# The London Medical Record.

## AMYLOID DEGENERATION OF THE KIDNEYS.

By Dr. M. LITTEN.

OF all the affections comprehended under the name Bright's disease, none is so variable as amyloid degeneration, both as regards the quantity and clinical composition of the urine, or the presence and extent of dropsy; but albuminuria has been generally regarded as a constant symptom. There is much difference of opinion as to the mode of production of this albuminuria, some holding that it is due to the increased pressure in the collateral glomeruli from the amyloid degeneration of some, others that the amyloid degeneration itself permits the serum albumen to permeate the vascular walls; others again attribute it to the coincident degeneration, the so-called chronic parenchymatous inflammation, of the renal epithelium. But, in spite of these variations, all are agreed in regarding albuminuria as a constant symptom of amyloid degeneration of the kidneys, a dogma which the following case shews us to be untenable.

On May 13th, 1876, K., aged 17, a merchant's apprentice, entered the hospital with signs of extensive phthisis, and at the same time the liver and spleen were found to be enlarged. There was slight diarrhoea; no dropsy; the urine contained no albumen. The further progress of the case was that of destructive pulmonary phthisis, with formation of great cavities, hectic, and diarrhoea. The urine meanwhile presented no abnormality; its quantity daily was about 1,000 c. c. (about 34 oz.) of sp. gr. 1011-15, clear, transparent, and bright yellow coloured. The pulse was very weak; there was no dropsy. On June 12 signs of dry pleurisy appeared on the left side, with great pain requiring narcotics; soon afterwards there appeared signs of dry pericarditis; also, on the 20th, an extension of the cardiac dulness, with enfeeblement of the pericardial friction, were observed, and at the same time slight œdema of the ankles and instep showed itself. The patient complained of abdominal pain increased by pressure. The diarrhoea persisted, in spite of the employment of astringent remedies. The urine, which had hitherto been clear and bright, became now brownish-red, turbid; its specific gravity rose to 1020 and over; the quantity in twenty-four hours sank from 950 cubic centimetres to 500 and 600. The whole aspect of the case and its history left no room to doubt the existence of amyloid degeneration of the abdominal organs and the mucous membrane of the intestine, so special attention was paid to the urine; but, though daily examined with the utmost care, albumen was never discovered; even on boiling it with concentrated solution of sulphate of soda and acetic acid, there was no trace of turbidity. Equally unsuccessful were the attempts to find tube-casts. The pulse remained small and feeble. While the pleuritic signs remained on the left side, and towards the end of July were audible on the right

side also, the pericardial effusion became greater, until at last the heart's sounds were scarcely to be heard. The quantity of urine remained small, frequently scarcely 500 cubic centimetres of brick red, thickly sedimented urine, free from albumen. The diarrhoea and abdominal pain persisted. The anasarca increased; there was collapse. On August 4th there appeared a miliary petechial eruption on the chest and belly, which increased on the succeeding days. The urine was only 350 cubic centimetres. The abdominal pain prevented sleep at night, and was only partially relieved by morphia injected hypodermically; the diarrhoea hastened the collapse to the end. On August 8th the urine was 380 cubic centimetres, specific gravity 1026, highly coloured, no albumen; pulse scarcely perceptible. Increasing dropsy killed the patient on August 9th.

The diagnosis was inflammation of the serous membranes, with pulmonary and intestinal phthisis, and at the same time amyloid degeneration of the liver, spleen, and intestinal mucous membrane. The participation by the kidneys in the degeneration was excluded by the results of the chemical examination of the urine.

The necropsy (made 9th August 1876 by Dr. Jürgens) verified the diagnosis and extended it, as general miliary tuberculosis and amyloid degeneration of the kidneys were present. "The left kidney, of normal size, showed on its surface as well as on section a few miliary and some larger yellowish white tubercle nodules in the cortical substance. The latter is of normal breadth, strikingly pale greyish white coloured. With iodine, numerous deep brown points and streaks appear." The right kidney was taken out entire for injecting and left intact. Microscopical examination showed that a large number of the glomeruli were degenerated, and that in many cases the entire vascular tuft was affected and transformed into a homogeneous glass-like mass. Partially degenerated glomeruli were rarely visible, the antithesis between normal and diseased being almost complete, the latter being much the more numerous. The interlobular arteries, *vasa afferentia et recta*, and the interstitial capillaries, showed the disease very plainly. The renal epithelium was quite normal, except a moderate degree of fatty degeneration of the epithelium of the convoluted tubules.

The second case was also one of phthisis—F. S., aged 23, admitted April 1st, 1878. There were a large hard spleen, and profuse watery diarrhoea, but nothing abnormal in the urine, although, as amyloid degeneration seemed so probable, it was examined with care. During the thirteen days he was under observation, his urine averaged 1000 to 1100 cubic centimetres daily, of specific gravity 1010; it was bright yellow, clear, without deposit, no albumen nor tube-casts. The lower extremities were on admission moderately swollen, and remained so till death. His pulse was throughout unusually small and easily compressible, somewhat irregular. The heart's sounds were clear. There were cavities in both apices; the pleural sacs were normal. The abdomen was tender on pressure; he had loose stools four or five times in twenty-four hours. Death occurred April 13th. The diagnosis was lung and intestinal phthisis, with amyloid degeneration of the spleen and intestinal mucous membrane, while from the recollection of the preceding case the possibility of amyloid disease of the kidneys was entertained.

At the necropsy were found ulcerating phthisis



of the lungs and intestines, sago spleen, fatty liver, with amyloid degeneration of the vessels, amyloid intestines and kidneys, fatty and very flabby heart, especially the left ventricle. The report says, "The left kidney appeared slightly enlarged; the surface was smooth, anæmic, the stellate veins slightly congested; on section the substance was very pale, without any special change to be recognised. The right kidney was reserved for injection and not cut. Iodine gave no very definite result to the naked eye; the characteristic coloration appeared in the vasa recta of the medullary portion, but in the cortex only here and there brownish red glomeruli could be seen. Microscopical examination confirmed these results so far that the vasa recta were very degenerated, and in the cortex there was a moderate affection of the glomeruli, only single capillary loops being diseased, and most of the tufts being quite normal. The interlobular arteries, as well as the vasa afferentia, and the interstitial capillaries were degenerated in places, but less than the vessels of the medullary part. There was no further change noticeable, except fatty degeneration of the epithelium of the straight tubules of the medullary portion, which in some places was so intense that the separate cells could not be distinguished. The heart's muscle was also to a great extent fattily degenerated."

The third case came under observation about the same time, and was that of a woman, K., aged 42, who complained of indigestion. Examination showed enlargement of the liver and spleen. Both organs were painful on pressure, and felt firm and hard. The surface of the liver felt uneven, without being granular; through the relaxed abdominal walls distinct lobulation could be made out. There was a little ascites; nothing abnormal in the thorax; stools normal; complete absence of anasarca. The quantity of urine up to shortly before death averaged 900 to 1,000 cubic centimetres, of 1011—13 specific gravity; it was generally clear, yellow, without deposit. Daily examination for albumen and tube-casts gave a negative result. She died after being in hospital fourteen days. The necropsy showed a well-marked syphilitic liver; the organ was on the whole enlarged, but contracted in places and furrowed by deep cicatrices; the parenchyma was studded with gummata. Microscopical examination showed that the arteries and branches of the portal vein had undergone amyloid degeneration. There were also sago-spleen and smooth atrophy of the tongue. Old tumours or cicatrices were nowhere present. The left kidney was of normal size, strikingly anæmic, and harder than natural. The iodine test showed to the naked eye degeneration of the vessels of the papillary layer, while the cortical vessels and glomeruli took on no noticeable change. The right kidney was reserved for injection. The heart was soft and flabby. The kidneys were examined microscopically immediately after the necropsy. The vasa recta were the most affected; the glomeruli were in part healthy, here and there degenerated, but only to be recognised by specks of coloration by iodine or methylaniline. The vasa afferentia took on the characteristic staining in parts, but the interstitial capillaries appeared quite healthy. Of other changes, only a slight degree of fatty degeneration of the epithelium of the straight tubules was noted.

In a fourth case, not seen by the author but communicated to him by Dr. Weigert, there was also amyloid degeneration of the kidneys, but no albuminuria before death, it was also a case of phthisis.

The kidneys were anæmic, otherwise unaltered, and the amyloid degeneration of the vessels would have passed unobserved but for the affection of other organs. The microscope showed moderate degeneration of the glomeruli and the cortical vessels; no other change was noted.

The first case related drew the author's attention to this subject; it was remarkable that, for three months during which it was under observation, only once was a slight turbidity noticed with nitric acid. It might be suggested that the affection of the coats of the vessels was too slight to permit the passage of albumen, or that the vessels concerned in that process were intact, but these explanations were disproved by the results of examination. It was very noticeable that some of the glomeruli were quite healthy, while the rest were in a very advanced stage of degeneration, and no intermediate partially affected tufts existed. By injection it was found that the fluid ran easily into the healthy tufts, but in no instance succeeded in reaching those diseased. This led the author to imagine that in this the explanation of the absence of albuminuria might be found. In order to test the truth of this hypothesis he examined all the amyloid kidneys he met with, and the cases above related are those in which no albuminuria occurred; but it will have been noticed that the same distinct separation of perfectly healthy from very degenerated glomeruli does not hold good in them, and in those partially affected, injections could be driven into the tufts, while it could not be assigned to want of pressure from feebleness of the heart, as this organ was healthy in Dr. Weigert's case. He was led, therefore, to look for its cause to the other concomitant changes, frequently met with in amyloid kidneys, the inflammatory affection of the parenchyma, absent in these cases, which were instances of simple uncomplicated amyloid degeneration, such as Grainger Stewart has described as the first stage of the general affection. He admits, however, that simple amyloid degeneration of the vessels may and does give rise to albuminuria, but need not do so if it is restricted to the capillaries, or only slightly implicates the glomeruli as well. The condition of the heart in these cases is a complication of the factors, which must not be lost sight of. Under such circumstances, the positive recognition of the state of the kidneys must be admitted to be impossible, and it raises for the general diagnosis of amyloid kidney new difficulties which scarcely appear surmountable. If in cases like the above, on the ground of dyscrasia with coincident enlargement of the liver and spleen, and the presence of profuse diarrhoea, a complication of amyloid kidney be thought of, yet, even when this happens to be actually found on *post mortem* examination, it remains rather of the nature of a surmise than a diagnosis. If the amyloid degeneration is secondary to a so-called interstitial or parenchymatous nephritis (the large white kidney of the English) the complication may easily be overlooked during life; on the other hand, when the diagnosis seems certain, in cases of constitutional disease with amyloid degeneration of the organs, at the autopsy the kidney is found to be large and white, revealing, however, no trace of amyloid degeneration after the most careful microscopical examination.

In pursuing these investigations, the author used the old method (iodine with and without the addition of sulphuric acid) and the aniline test; he considered no case proved in which the reaction could not be obtained with both. In only one case has he found

any difference in these methods; that was a kidney which contained many tube-casts, and on section these took on bright red staining with methylaniline, and yellow with iodine. During life, the cylinders in the urine presented no characteristic reaction. He does not agree with Fürbringer in thinking that this proves methylaniline a better test for amyloid degeneration than iodine, or that the tube-casts in this case were really amyloid. He has used both, and thinks, as a rule, one is as good as the other; but the methylaniline is more easily applied, and the contrast is more striking. He refers to the disputes as to the vessels primarily attacked, and is of opinion that, although those of the glomeruli generally suffer first, this is not a rule without many exceptions. It has also been laid down that the muscular coat is first affected. To this he also takes exception as an universal rule; he has found in some cases the intima, in others the adventitia, diseased, while the muscular coat was still normal. There is no reason to believe that the degeneration extends by direct continuity, isolated sections of vessels being frequently diseased. He believes that the degeneration in the kidney always begins in the vessels and not in the interstitial tissue. The capsules of the glomeruli are often affected. He has seen three cases of venous thrombosis, as recorded by Bartels. There were no clinical manifestations of this condition, although the trunk of the renal vein was obstructed, and the thrombus extended far into the renal substance. The kidneys were white, and showed no trace of venous engorgement. From this and from the possibility of completely injecting the organ without extravasation it was plain that sufficient collateral veins existed or had been developed since the thrombosis to carry on the circulation; but a complete explanation of these thromboses, which are generally unilateral and very seldom on both sides, cannot at present be given. The slowing of the blood-stream by increased resistance is not a sufficient explanation, considering the frequent oneness of the affection.

ROBERT SAUNDY, M.D.

### LASÈGUE ON PERIPHERAL HYSTERIA.

IN the June number of the *Archives Générales de Médecine*, there is a paper by Professor Lasègue on certain local manifestations of hysteria, which he terms "*hystéries périphériques*". We must admit, says the writer, that the origin of hysteria may be either central or peripheral. In the former case the brain or the spinal cord may be the causative agent of the hysterical manifestations, or, as is frequently seen, the two combined. Certain patients who are subject to the most marked convulsive attacks never suffer from any mental disturbance whatever; while others, who have been always free from every form of spasm or convulsion, as well as from anæsthesia or hyperæsthesia, and who have never had what is properly termed a *fit*, may nevertheless suffer from many forms of cerebral disorder, varying from the slightest perversion of the intellect to confirmed delirium.

It is not of any of these forms of hysteria, however, that Dr. Lasègue is treating in the present paper, but of those manifestations which he considers to have a peripheral origin. These manifestations, he says, are local, non-symmetrical, and without any tendency to become symmetrical later; they occupy very limited regions, and are most frequently in relation with but a limited portion of

the nervous system. Their localisation is not a matter of chance. We can observe the manner in which they begin and their mode of evolution, whereas the origin of hysterical manifestations due to a central cause almost always escapes our notice.

The author gives as his first example of "peripheral hysteria" the case of a girl, fourteen years old, who, having suffered for a few hours from epiphora and some redness of the eyelids after a playmate had thrown some sand into one of her eyes, awoke the next morning with a spasm of the eyelids on that side, which rendered it impossible for her to open that eye; and it remained closed during four months, notwithstanding various remedies were tried. At the end of that time the spasm ceased suddenly one night, and never returned.

Dr. Lasègue considers that the irritation produced by the sand was no doubt the immediate cause of the spasm, but cannot be regarded as adequate to account for its long duration, which he looks upon as an hysterical phenomenon; and his view is confirmed by the fact that the patient became afterwards the subject of various hysterical manifestations, although previously to the conjunctivitis she had been free from anything of the kind.

Several other cases are brought forward as examples of "peripheral hysteria", provoked by some local external cause. One of Dr. Lasègue's patients, whose voice and singing were much admired, suffered for nearly two years from complete extinction of voice, and this came on during her convalescence from a very slight attack of bronchitis, which had not affected the voice, or but very little. Another, after an attack of indigestion, fearing to bring on the pain again, refused to touch either food or drink for twenty-four hours; and when at the end of that time she attempted to drink a cupful of milk, the whole came back, evidently in consequence of a constriction of the pharynx or œsophagus. This constriction lasted for some weeks, and even after it ceased the spasm would return occasionally. Space will not allow us to enumerate the many other examples of peripheral hysteria cited in Dr. Lasègue's interesting paper. He concludes by saying that it is evident there are certain subjects in whom the slightest traumatic irritation may determine a spasm of exceptional obstinacy. Such spasms he would designate rather by the name of *hysteroid* than *hysterical*. If they are found in certain cases to be merely the precursors or successors of the ordinary hysterical "attacks"; they may also be, for some years at any rate, the only manifestations of the disease.

W. ALLEN STURGE, M.D.

### TERRILLON ON SUDDEN DEATH BY EMBOLISM.

IN the *Archives Générales de Médecine* (June 1878) Dr. Terrillon gives the details of two cases in which sudden death was caused by embolism in the right side of the heart. Theoretically such a possibility has been admitted by many pathologists and clinical teachers, but confirmation of the theory has hitherto been wanting or imperfect. The first case cited by Dr. Terrillon is borrowed from M. Tillaux, surgeon at the Lariboisière Hospital in Paris. A woman, 56 years of age, came under M. Tillaux's care for a fracture of the fibula and internal malleolus. The foot was partially dislocated outwards, and the skin was very tense over the malleolus, but without abrasion.



The dislocation having been reduced, plaster of Paris splints were applied, and everything went on satisfactorily till the twenty-third day after the accident, when the limb was found to be painful and swollen. This condition M. Tillaux thought might be due to pressure from the bandages, which he therefore loosened, and the patient was immediately relieved. Twenty days later (forty-three days after the accident), suddenly, at the time of the doctor's visit, the patient, without having made the slightest movement, turned pale and ceased to breathe. After one or two minutes, consciousness returned rapidly, and she was able to give an account of her sensations. Dr. Tillaux had scarcely gone the distance of a few beds, when a second and mortal syncope occurred. At the necropsy, a thrombosis was found filling up the popliteal and femoral veins as far as the crural arch; the clot, which was adherent to the walls in almost its whole extent, was free above, fibrinous, and terminated in the form of a serpent's head. The pulmonary artery was free, the lungs sound, except for a slight congestion of the left. The heart was loaded with fat. The right ventricle contained a clot about two centimètres long, twisted in the columnæ carneæ. When this clot was compared with that in the femoral vein it was manifest to everyone that the cardiac embolon was a fragment of the crural clot.

The second case is that of a man who came under Dr. Terrillon's care for multiple fistulæ in the region of the coccyx, with extensive disease of that bone and of the sacrum. Resection of the one (its point excepted, which adhered to the fibrous ligament of the perinæum) and rugination of the other were performed, the patient being under chloroform. The dressing was water and carbolic acid, and every morning Dr. Terrillon himself syringed out the wound with the same fluid. The patient's general health greatly improved, and the wound was healing, when one morning, being desired by Dr. Tillaux as usual to turn on his side, he did so, and then remained immovable. All means were tried to rouse him, without success. He took two or three deep inspirations, the pulse beat feebly, the eyes were half shut, the face and lips violet, there was no agony, and he died without having uttered a sound.

The necropsy soon revealed the cause of this sudden death. All the veins surrounding the diseased parts of the bones were full of clots and bathed in pus. The great veins of the pelvis, however, were intact, viz., the femoral, hypogastric, and inferior vena cava. The left side of the heart was intact and in systole. It contained a few drops of blood, but no clots. The right side, on the contrary, contained, between the tricuspid valves, a clot about ten or twelve centimètres (four or five inches) long, cylindrical in form, scarcely as thick as a quill, entangled in the chordæ tendinææ, and projecting in one direction into the auricle, in the other into the ventricle. The pulmonary arteries, examined with great care, even in their smallest ramifications, contained no trace of clots, only dark liquid blood in abundance.

Dr. Terrillon considers the clot found in the right ventricle as the result of an embolon from the veins of the pelvis and sacral region, which were evidently in an abnormal state. The clot had the appearance and structure of an old clot. It was grey, not white and gelatinous, like those formed in the heart at the moment of death. The bifurcation was quite distinct, and indicated that it must have come from a vein formed by the anastomosis of two smaller veins.

Is not the kind of death itself a sufficient proof that the clots, having come from some part of the venous system, had stopped in the heart? M. Charcot, who saw the specimen at the Société Anatomique, did not hesitate to say that he looked on this clot as an embolon which had stopped in the heart, and become the cause of death by impeding the action of the tricuspid valve.

Dr. Terrillon's conclusions are the following. 1. An embolon from the general nervous system may stop in the heart instead of going into the pulmonary artery, as it is generally admitted it may do. 2. It may induce sudden death by apparent syncope, but there are certain phenomena which differ from the ordinary syncope, such as cyanosis of the face and lips, swelling of the veins in the neck. The heart does not stop suddenly, but its pulsations become all at once tumultuous, small, hardly perceptible, while the pulse is thread-like. After a few minutes, the heart stops completely. 3. There is no respiratory anxiety at the moment of death, no orthopnoea, as in embolism of the pulmonary artery. On the contrary, the patient dies without any apparent struggle. 4. When death has been preceded by transitory symptoms of apparent syncope, or in the case of patients suffering from phlebitis, we may suppose that a very slender or soft clot was stopped for an instant between the chordæ tendinææ of the tricuspid valve and has gave rise to those accidents.

W. ALLEN STURGE, M.D.

#### ESMARCH ON CANCER.

IN a paper on cancer read at the congress of the Society of German Surgeons in 1877, and subsequently published in von Langenbeck's *Archiv für Klinische Chirurgie*, Band xxii, Heft 2, Professor Esmarch presented several aphorisms on the clinical history of cancerous disease. After a statement of the well-recognised fact that the terms "cancer" and "malignant growth" are no longer synonymous, the author points out that growths which usually take a benign course may occasionally present an undoubted malignant character. This change may occur in enchondroma, fibroma, and fatty tumours; and, as has been recently shown by Cohnheim, a cystic bronchocele may acquire a malignancy equal in intensity to that of typical sarcoma and carcinoma. Most surgeons of experience have had opportunities of observing cases in which there had been a speedy cancerous degeneration of a long-standing wart on the face of an old person. Of less frequent occurrence, however, although the author has seen four instances of this, is the rapid conversion into a malignant tumour of a simple atheroma of the scalp, a form of new growth commonly regarded as most benign. Cases of this kind were reported by Diefenbach and Wernher. In some remarks bearing on the clinical facts that lingual and buccal psoriasis is frequently converted into a cancerous ulcer, and that old scars, especially those formed after lupoid ulceration, frequently undergo cancerous degeneration, the author puts the question, whereby and under what conditions do benign new growths and cicatrices take on a malignant character? It is well known that the repeated action on a soft structure of some irritating body may be followed by the appearance of a cancerous growth, and there can be no doubt that the prolonged or frequently renewed contact of tobacco-juice, soot, and paraffin may give rise to cancrroid of the skin. In the great majority of cases

of cancer, however, no evidence can be obtained of the previous action of any irritant, and so one is led to inquire whether the malignant disease may not be due to some constitutional anomaly or dyscrasia. Dr. Esmarch seems disposed to hold that the inherited dyscrasia of scrofula and syphilis may create a tendency to malignant new growth. Such an association, however, it is granted, cannot be made out save by the exercise of much patience, and the expenditure of much time in obtaining complete clinical histories. It is stated by the author that many undoubtedly malignant tumours may be cured by operation, provided the surgeon interfere early, and the growth be radically removed. Unfortunately, in too many cases the operation is not performed until a late period, and when many other and milder methods of treatment have been tried. In most of these cases the blame, the author holds, rests with the patient.

In discussing the treatment of cases of advanced cancer in which surgical operation is hopeless, Professor Esmarch states that, in his opinion, arsenic is a very efficient agent, and one that may be used, internally as well as externally, with the best effect. The practice is recommended of giving Fowler's solution after removal of a cancerous growth, in order to prevent relapse. The employment of this agent is naturally suggested by what we know as to the nature of cancer. Arsenic certainly acts beneficially on certain affections of the epidermis, and cancer may be strictly regarded as an excessive overgrowth of epithelium. It is necessary in desperate cases of cancer to administer arsenic in rapidly increased and finally heroic doses. The good results recently obtained by Billroth and others from the employment, both internal and external, of arsenic in cases of malignant lymphoma, show that growths not of an epithelial structure may also be cured by this agent, good results from the use of which have also been gained in the treatment of cases of lympho-sarcoma.

Dr. Esmarch has repeatedly applied electrolysis for the destruction of cancerous growths which could not be totally removed by operation, but in only one case with any marked success. Canquoin's paste acts very efficiently on the removal of new growths, but a great objection to the use of this compound is the pain it creates, which is very severe, and but partially relievable by morphia.

In some remarks on a reported case of relapsing sarcomatous tumour, treated successfully by the use, both internal and external, of iodine, Dr. Esmarch suggests that many malignant new growths, especially those which improve on the administration, in large doses, of tincture of iodine, may be associated with inherited or acquired syphilis. There are many clinical and pathological facts that indicate such an association. All pathologists agree that it is very difficult to distinguish histologically between the products of tertiary syphilis, the so-called gummata, or syphilomata, and sarcomatous new growths. The small-celled infiltration of the tissues of the nose, described by Hebra under the name of rhinoscleroma, which stands midway between chronic inflammatory proliferation and malignant new growth is frequently associated with long-standing syphilis. It is well known, also, that buccal and lingual psoriasis, which so often terminates in cancer of the tongue, has frequently a syphilitic origin. It is acknowledged, however, that a product of advanced syphilis or of scrofulosis is frequently mistaken for a malignant new-growth, and that even

by many an experienced surgeon an ulcerated gumma or a tubercular ulcer of the tongue has been excised as a lingual cancer, a syphilitic ulcer of the lip as a labial cancer, and syphilitic growths from the mucous membrane of the rectum as rectal cancer. Mistakes of this kind are more likely to occur, as it is not generally known that ulcerating gummata may be met long after the date of the primary affection, and without the appearance during the interval of any secondary symptoms.

In consequence of the probability of such errors, Dr. Esmarch has made it a rule in his practice never to extirpate a morbid growth before having made out its structure and nature by microscopical examinations. For this purpose, a very small piece removed from the surface of the growth or from its central part by means of a proper instrument, will suffice. When there is an indication of having to perform an important and dangerous cutting operation for the removal of the new growth, the surgeon need not hesitate to carry out this very minor and safe preliminary measure.

W. JOHNSON SMITH.

#### SURMAY ON ENTEROSTOMY.

IN the *Bulletin Général de Thérapeutique*, May 30, M. Surmay has an extensive and interesting article in which, starting with the statement of the well-known facts relating to deaths from inanition in cases of pyloric closure, and the very limited efficacy of rectal and subcutaneous alimentation, he questions whether it is not possible to act upon the small intestine just as upon the stomach when the cardiac extremity is closed; if, in other words, "enterostomy may not in certain cases render the same service as gastrostomy". He enters at length upon the consideration of the involved double problem of physiology and surgery; 1, "Will the intestinal digestion suffice for the elaboration of alimentary substances, in such manner as to render them assimilable and nutritive without the direct intervention of the stomach?" and 2, "Is it possible to make and maintain at a convenient point in the small intestine an opening through which may be introduced certain appropriate substances, that afterwards shall undergo the changes necessary to render them assimilable and contributive to nutrition?" He holds that all the chemical changes required in food to render it absorbable are effected in the intestine, and that but a single one of them commences in the stomach, and that the suppression of the gastric action does not very seriously affect nutrition (as indicative of which he cites the case of sphacelation of the entire mucous membrane of the stomach with almost complete integrity of the digestive organs, reported by Dujardin-Beaumetz), while it is altogether otherwise if the intestinal action be wanting, as has been shown in certain reported cases of artificial anus high up; and he believes that the first question can be answered in the affirmative, provided that proper means are adopted to prevent the escape, through the opening made, of the biliary and pancreatic fluids; such means being the maintenance of the dorsal decubitus during digestion, and, if necessary, the use of a cup or India-rubber bag to catch the escaping liquids which can later be returned into the bowel. In opening the small intestine, the following procedure is recommended.

On a line about a third of an inch internal to the anterior extremity of the ninth rib of the left side, a



vertical incision from 2 to 2½ inches long is to be made in such a manner as that its central point shall correspond to the ninth rib. The skin, the superficial fascia, the external oblique, the internal oblique, and the transversalis muscles, and the transversalis fascia, are to be successively divided, and the peritoneum opened, with the usual precautions. The omentum being turned out of the way, and "the intestinal mass uncovered, the transverse colon, which is at the upper end of the incision, may be easily recognised, and very readily distinguished by its direction, by its colour, whiter than that of the small intestine, by its bands and constrictions, and, finally, by its relations with the omentum. Immediately below are the aggregated coils of the small intestine. Between these coils and the transverse colon, the index finger is to be carried directly down and pushed on until it meets the spinal column. The left extremity of the pancreas can then be felt, and immediately to the left of this extremity and, as it were, connected with it, an intestine, the direction of which is transverse. This intestine is to be hooked up with the curved index finger and drawn out. If it be perceived that it yields on one side but remains firmly attached on the other, it is the jejunum at its origin. If, on the contrary, it can be equally well drawn up on both sides, it is a part of the canal further down, and must be let go, in order to search again. Most usually we come after the first stroke (*coup*) upon the part sought for, but if we fail it is not difficult, nor does it require any great length of time, to find it. Once seized, it is to be brought up between the lips of the wound in the skin and fixed there by a sufficient number of points of the interrupted suture. This done, the intestine can be opened and appropriate alimentary substances introduced". The author in a foot-note says, that he has selected the first part of the jejunum in which to make the opening, because it can be easily found by following the method indicated; while, if the incision be made in any other part of the abdominal wall, we have no certain means of knowing what part of the small intestine has been opened. Enterostomy then, being in a surgical point of view an operation perfectly according to rule, and physiologically considered a rational one, should, according to M. Surmay, be regarded as the proper one in those cases in which there is no cachexia nor hæmorrhage, no threatened perforation nor peritonitis, where the real cause of the impending death is inanition consequent upon impassable constriction of the pylorus, or, the pylorus being open, upon absolutely uncontrollable vomitings due to nervous disturbance or even to simple ulceration of the gastric mucous membrane. Though enterostomy has never been performed upon the living human subject, and will remain an operation of altogether exceptional rarity, M. Surmay hopes that he has done something useful if he has been able to show that it is rational, easy of execution, and, to all appearances, capable of practical application.

#### WELLS ON THE DIAGNOSIS AND TREATMENT OF ABDOMINAL TUMOURS.

MR. T. SPENCER WELLS, as Professor of Surgery and Pathology to the Royal College of Surgeons, has delivered six lectures upon the result of his twenty years' exceptionally large observation and practice in this department of surgery. They have been published in the *British Medical Journal*, June 15, 1878, and following numbers.

The first lecture was devoted to the mode of examining patients, and was a full yet concise epitome of all that could be said upon the subject.

In the second lecture, the microscopic character of the fluid removed as an aid to diagnosing the character of the tumour were first dealt with, and the value of Drysdale's cells and Knowsley Thornton's larger cells was clearly pointed out.

The numerous abdominal tumours with which ovarian disease has been confounded, were next reviewed. In one instance, Mr. Wells, operating for ovarian cyst, removed a large renal cyst, finding the ovaries healthy, and the uterus enlarged by a polypus. Upon another occasion, a lady, with supposed movable kidney, being under operation for ovarian disease of the opposite side, the floating body was found to be a movable ovary with a pedicle fully a foot long. Many other curious difficulties in diagnosis are recorded.

In his third lecture, Mr. Wells entered upon the surgical treatment. The merits and demerits of tapping received their full consideration. The advantage of placing the patient on her side and using Mr. Wells's trocar with sliding point was clearly shown. When we have to tap by the rectum or vagina was next discussed, and then came the question, "Is this a case in which ovariectomy should be recommended?" the reply to which was, "So long as the patient is moderately comfortable, so long as she can walk a mile, or for half an hour, without inconvenience, so long as she can get up and down stairs, so long as there is no great pressure upon any of the organs of the abdomen or pelvis, and she can breathe pretty well, and her heart is not interfered with, such a patient may be left to ordinary palliative treatment, with the usual attention to the general health." If the operation be delayed, do not subject the patient to useless treatment, as everything is quite useless and may be injurious. If operation be decided upon, then what chance does the patient stand is our next consideration. This is much better arrived at by considering the general condition of the patient than by the size of the tumour, or extent of the adhesions; therefore, do not delay too long until the health be broken down. Still, a patient who is accustomed to the life of a sick room, bears an operation much better than a person taken from the ordinary pursuits of an active life, and at once subjected to such an operation.

Then followed details of the mode of operation, as regards the position and preparation of the patient, and the use of anæsthetics, of which, bichloride of methylene is Mr. Wells's favourite: he has employed it in 900 operations and has never had the smallest anxiety about the patient. The tumour having been removed, Mr. Wells discussed the various modes of dealing with the pedicle, giving the preference to the clamp in all cases when applicable. In 900 operations, 627 cases were clamped, with a mortality of 20.73. The ligature was employed in 137 cases, with a mortality of 38.2. The cautery and other forms of clamp were fully explained, and the relative advantages discussed. Next in order was the closing up of the abdominal incision, which is now effected by including the peritoneal coat with the other tissues of the abdominal walls, in the silken ligatures. Before closing the outer wound, particular cautions were given that sponges or forceps should not be left in the abdominal cavity, and several cases that had occurred in Mr. Wells's own practice were related, showing the necessity of counting the sponges and instruments, to be sure

none are left behind. In the after treatment, rest, quiet, fresh air, stimulants only in case of necessity, and careful attention to diet, were insisted upon.

As a means of lowering temperature, should it arise, all varieties of drugs have disappointed; but in the ice cap, as devised by Mr. Thornton, it was shown that we had an efficient means of controlling this important symptom, from which so many of the evil results of ovariectomy appear to owe their origin. The brain receiving blood of five or six degrees higher than it has been accustomed to, does not give its orders to the secreting organs as it should do, and they all suffer in consequence.

Lord Selborne calculated that, by Mr. Wells's 679 successful operations, 19,691 years of average healthy life had been secured for the survivors. Dr. Peaslee in 1872 calculated that, in the United States and Great Britain alone, ovariectomy has contributed more than 30,000 years of active life to women, all of which would have been lost had not ovariectomy been performed.

Regarding *Antiseptic Ovariectomy*, Mr. Wells has been putting it to the test since the commencement of this year, 1878, and purposes to continue the trial until a definite conclusion is arrived at; already he has noticed that there has been in each case a less elevation of temperature than he has ever seen before, in some 100 to 101° being the extreme. In antiseptic ovariectomy, fever is the exception; formerly it was the rule. Let the antiseptic treatment, therefore, be regarded not as a substitute for those measures which have already proved so effectual, but as an additional safeguard.

The last subject Mr. Wells touches upon is the surgical treatment of *Uterine Tumours*. Twenty-four such cases were removed through the abdominal walls, of which, only nine recovered. Eight patients are in good health at the present time, who, but for the operations, would long since have been in their graves, or be passing their time as helpless invalids. In 21 other cases, the operation was not completed; in some, merely the abdominal exploratory incision made; in others, the tumour was incised or penetrated, or a larger or smaller portion of it removed, and, in only one case was death accelerated by the operative interference.

Freund's method of removing the uterus in cases of cancer is illustrated by diagnosis, and appears to Mr. Wells to be the best plan for ensuring success where success is possible. Full honour is rendered to Dr. Ephraim McDowell who, in 1809, performed the first ovariectomy operation, his patient living 32 years subsequently. (A review of his life may be found in the *Medical Times and Gazette*, March 1874, p. 357.)

RICHARD NEALE, M.D.

## BOETTGER ON THE MISUSE OF BROMIDE OF POTASSIUM.\*

IT is by no means uncommon for methods of treatment of the greatest importance, so soon as they become well known to the laity as well as to the profession, to be so misapplied as to cause unfavourable results, and thus to bring general discredit upon procedures which, when adopted with discrimination, are of the highest value. As instances of this may be cited, the administration of chloroform and of hypodermic injections, especially of morphia; also

the use of chloral-hydrate; from the abuse of all of which the most lamentable effects are frequently brought under our notice.

Among the class of nervine and hypnotic medicines, bromide of potassium has of late taken very high rank; administered timidly at first in small doses, it is now freely given in large quantities, its use as a hypnotic is constantly becoming more frequent, it has taken an important place in the materia medica of alienists, it has been recommended as a sovereign remedy for epilepsy, and the literature of the subject is already very considerable. All these circumstances render the drug peculiarly liable to abuse. For a long time it was regarded as incapable of doing harm, until Seguin of Chicago showed that its indiscriminate use was greatly to be deprecated, and that the long-continued administration of preparations of bromine may, and often does, give rise to a well-defined disease (bromism), characterised by the following symptoms:—feelings of weakness and lassitude, depression of the heart's action, coldness of the extremities, a peculiar heaviness of speech, a pustular or papular eruption of the skin (which may be confined to a few spots, or may be so abundant as to resemble that of variola), and, lastly, a peculiar, sweet, but unpleasant odour of the breath, which Dr. Boettger has invariably been able to distinguish in patients who have taken the drug continuously.

In still higher degrees of bromism, with which the present paper is more directly concerned, Seguin found that stupor supervened, memory and articulation seemed to be especially affected, hallucinations of all the senses were observed, tremor of the muscles came on with unsteady gait, all movements became uncertain, and the more delicate ones impossible, the pupils were unequal and reacted only slowly; in male patients sexual power, and in females menstruation, was disturbed. It is evident that a patient in this advanced stage of bromism might easily be taken to be suffering from paralytic dementia. Seguin admits that the diagnosis might present great difficulty, and Boettger has actually experienced it: the history of the case is the most important point from which to form an opinion. A fatal issue is, moreover, not uncommon in severe cases of bromism. The following case illustrates well the resemblance between advanced bromism and the last stage of general paralysis.

Herr C. R., aged 29, well-educated, had no hereditary predisposition to insanity, and had previously enjoyed good health. With the exception of some severe hardships which he suffered while serving in the Franco-German war, he had always led a steady and regular life. After not having felt quite himself for some time, and suffering from want of mental activity, etc., in June 1877, marked depression set in, accompanied by delusions of persecution and hallucinations of various senses. Continuous sleeplessness being also present, his medical attendant prescribed bromide of potassium in doses from 80 to 90 grains *per diem*. The patient, however, took the drug irregularly; on some days he only took 45 grains, but on others as much as 150 and 180 grains; within four months he consumed about 35 ounces of the drug, giving an average of over 130 grains daily. During this time his condition became rapidly worse, he became stupid and forgetful, his features lost their expression, and his bearing was careless and unsteady. His speech was heavy, though not exactly stammering, muscular tremor supervened, and the patient's gait became staggering. In this condition, he was brought to Dr. Boettger at the Carlsfeld Asylum as a

\* *Allgemeine Zeitschrift für Psychiatrie*, Band xxxv, Heft 3.



case of general progressive paralysis. The first impression made by the patient seemed to justify this diagnosis. Besides the symptoms mentioned above, it was noted that the pupils were very unequal (the left being the smaller) and both reacted very slowly; the tongue was slightly coated, tremor of its muscular bundles was observed, and it was inclined to the left side; speech was slow, heavy, and interrupted by long pauses, as if the patient had a difficulty in thinking of his words. The pulse was small and faint, the surface-temperature low; his whole appearance indicated mental and physical decay. The entire body inclined markedly towards the left side, as is frequently the case in paralytic patients. The peculiar faint sweet smell of the breath, already noticed as occurring in bromism, was very marked. The first diagnosis made was that of paralytic dementia.

At first, small doses of the bromide were given, and the patient rapidly became more stupid and unsteady in his gait; he once fell while walking and injured his forehead, when it was noted that sensibility to pain was greatly diminished. After a very few days, owing to loss of appetite and strong fœtor of the breath, the bromide of potassium was discontinued, quinine and iron being prescribed instead: the immediate improvement in the patient's condition, combined with other considerations, very soon made it clear that the case was one of bromism. The patient had to be fed with a spoon, and took only liquid and soft food for some time; the stupidity continued for about a month; after that time Herr R. became gradually more active; his bearing was more upright, and his countenance showed more expression; his gait also became more sure and the fœtor of the breath disappeared. Appetite and interest in things in general returned. Memory also improved, but was quite extinguished for events which had occurred during the height of the bromism. During the next few months the patient rapidly recovered, all the parietic symptoms passed away, and he is now enjoying good mental and bodily health.

CHAS. S. W. COBBOLD, M.D.

#### ALLBUTT ON BRAIN-FORCING.

DR. CLIFFORD ALLBUTT contributes an extremely original and thoughtful paper on mental function, to the first number of *Brain*, the new psychological journal.

If it be true that the aim of good education is to insist upon a mastery of one or more subjects, but, at the same time, to gain an adequate notion of the whole field of the battle of life, then assuredly our author may be congratulated upon having made good use of his time. His complete mastery of one subject—practical medicine, and the versatility displayed in this article, seem to fully indicate that he has lived up to his own standard as regards mental training, and that he is quite in a position to point out to others less gifted than himself certain rules for their intellectual guidance.

Dr. Allbutt commences by subdividing mental function into five "aspects of nervous activity", as they appear to ordinary observers. These are quality, quantity, tension, variety, and control, all of which are explained at length as we proceed.

"By the higher quality of the brain or part of it", writes Dr. Allbutt, "I mean that structure of cell and fibre, which corresponds more widely or more intimately with outer conditions, so that by virtue of such relation the individual more readily apprehends things and conceives them. This is genius in the

stricter sense. By quantity, I mean the volume of nerve-force given off by the brain or its parts without regard to quality of work done. By tension, I mean the power in the nerve-action to overcome inner or outer resistance, 'nervous energy', as it is colloquially called. By variety, I mean the congregation of different centres, and the weaving of mediate strands which give the possessor not higher or wider, but a greater number of relations with outer things. In common life, this is usually called versatility. By control, I mean that subordination of one centre to another, whether inherited or acquired, which, if of the lower to the higher, results in the obedience to the more permanent order of the universe. Thus a man may have a lofty, an abundant, an intense, a versatile, and a well-ruled nervous system; or he may have any measure of these states in various proportions."

Numerous examples are then brought forward, of living and dead celebrities, to illustrate these views, the whole culminating in a description of the advantages of self-control.

"Of all endowments", writes Dr. Allbutt, "control is the most precious and its nurture our most bounden duty. For a happy and useful life, perhaps control is more needful than quality, volume, variety, or even tension of the brain. Of all gifts, then, to be cherished and nurtured, perhaps we should place first control, as by it effort is husbanded; perhaps of equal or scarcely of the second place, comes tension; quality of brain cannot be had for the asking, and lack of quantity in individuals may be compensated by numbers. Variety, however charming, however grateful, is the least precious of these conditions of brain, and is the last which calls for nurture."

Certain important points connected with the physical aspect of the question are next alluded to.

"A dyspeptic may well have nerve-force of high quality and of high tension, but", says Dr. Allbutt, "I never met with a dyspeptic whose nerve-force welled continuously forth. Like Brougham and Cavour, men of great power of continuous work have usually been large as well as sound eaters. A 'hard headed' man is also a hard bodied man; and the national history of Europe is a long display of the successive triumphs of the men of colder over the men of warmer regions; of the hardy, lusty, and hungry races over the softer, more indolent, and more abstemious." . . . "I am not one of those", continues our author, "who think the love of athletics is as yet in excess. Here and there men may expend in the hunting field or on the river that which should have been given to their tripos, to their profession, or to their country; yet this at worst is but an individual loss, far outweighed by the impulse given to the hardy, hungry vitality, by which the nation thrives, and its general volume of nervous force is augmented."

The evils of prematurely forcing the nerve-powers of the young are next forcibly dealt with. Original compositions from children, competitive examinations when carried to excess, the preaching tasks from students in theological colleges, and the effete creations of young artists and musicians, are all instances of precocity in those who ought to be still acquiring knowledge and adding to their stores, instead of displaying their crude productions to the surfeited glances of a critical public.

The success of mellowed and mature thought is especially observable in musicians. Handel composed his great oratorios after he had passed his

fiftieth year. Sebastian Bach wrote the B minor Mass at the age of forty-eight, and the two Passions somewhat later still. Beethoven wrote his grandest works after the age of forty-five; and, in times more modern, Wagner composed *Lohengrin* and the *Ring des Nibelungen* when past sixty years of age. The *Paradise Lost*, the *Divina Commedia*, and the *Tempest*, are also not works of youth but of age.

Dr. Allbutt concludes by saying, "the true purpose of education is, first of all, to teach discipline. The discipline of the body and the higher discipline of the mind and heart; to encourage the budding faculties to break freely in natural variety; to quicken the eye and the hand, and to touch the lips with fire; to promote the gathering of the fountains of vigorous life by fresh air, simple nutritious diet, and physical exercise; and, finally, to watch for the growth, silent it may be for years, of the higher qualities of character, and even of genius, not forcing them into heated and froward activity, but rather restraining the temptation to early production, and waiting for the mellowness of time; remembering that the human mind is not an artificial structure, but a natural growth; irregular, nay, even inconsistent, as such growths are, wanting most often the symmetry and preciseness of artifice, but having the secret of permanence and adaptability."

H. SUTHERLAND, M.D.

#### AUFRECHT ON PARENCHYMATOUS INFLAMMATION, AND THE MODE OF FORMATION OF FIBRINOUS TUBE-CASTS.

DR. E. AUFRECHT, of Magdeburg (*Centralblatt für die Medicin. Wissenschaften*, May 11), has made a series of experiments by tying the ureters of rabbits on one side, in order to verify his opinions as to the connection between parenchymatous and interstitial inflammations and the existence of a primary independent parenchymatous inflammation. He found that at first simple parenchymatous inflammation occurred, and a day later interstitial inflammation supervened. If the animals were killed within the first three days the affected kidney was found noticeably swollen, and its pelvis and ureter above the ligature were much distended. On microscopical examination the interstitial tissue of the organ was quite normal throughout, as was also the medullary parenchyma, but the tubules of the cortical substance, especially the convoluted ones, showed dilatation of their lumina with granular and fatty degeneration of their epithelium. In a majority of these tubules there were the finest fibrine-cylinders; these were seen best when the organs were examined fresh, or after being in bichromate of potash for only a few days. The cylinders then project from the tubules. When they are inside of these, they are only very rarely seen on account of their being covered by the clouded epithelium. After longer hardening, only a much smaller number can be found; apparently because it is only in fresh specimens that they are squeezed out of the tubules by the shrinking or contraction of the tissues. It is, therefore, necessary to tease out the preparation in order to demonstrate them after hardening. The following facts concerning their origin are noteworthy. The epithelium in these kidneys was complete throughout. The cells were much clouded, could not be distinguished separately, and their

nuclei required fuchsin to make them visible; a defect was nowhere visible. Within this completely unchanged epithelial layer lay the clear pale cylinders. It is plain that the epithelium as such, that is, their substance *in toto*, could not have been employed in forming these cylinders.

Again, there is the possibility that they owe their origin to an exudation from the blood-vessels. The interstitial tissue and the blood-vessels did not show the slightest change within the first three days. Besides, the increased intratubular pressure due to the ligature on the ureter makes the entrance of fluid into the tubules out of the blood-vessels scarcely conceivable; and thirdly, in those kidneys in which interstitial inflammation had commenced, the fibrine-cylinders had disappeared. If the animals were killed after six days, the interstitial tissue was found distended by numerous cells, the epithelium of the tubules was less cloudy, well defined from each other, and with very visible nuclei, no sign of epithelial destruction, and no cylinders in the tubules. The author has verified this observation in kidneys, the ureters of which had been tied six, twelve, and up to twenty-three days. In addition he gives the following positive facts. He saw once a cylinder made up of single irregular pieces, which were separated by fine bright lines. Twice he saw epithelial cells, with bright round structures protruding, which in appearance completely agreed with the pale cylinders. He therefore concludes that the fibrine are cylinders formed in consequence of the irritated state of the epithelium from the urinary stasis, that they are a secretion of inflamed epithelium which exudes in the form of large clear drops, and subsequently runs together into cylinders taking the form of the tubules.

The presence of urinary cylinders contemporaneously with disease of the epithelium, and the absence of any trace of interstitial change, are also important proof of the correctness of the view that there is undoubtedly a primary parenchymatous inflammation.

Virchow has fallen into the error of maintaining that parenchymatous inflammation leads to the destruction of the affected elements; he assigns to it a degenerative character. In reality, from this opinion proceeds the view of a great number of our modern pathologists, that parenchymatous inflammation is not inflammation, but a secondary process, and much more to be regarded as a simple nutritive derangement. In opposition to Virchow, Aufrecht assigns to parenchymatous inflammation an eminently separative character, and the proof of this must upset the opinion that it is only a secondary process. When a muscular fibre in typhus or other nervous affections loses its transverse striæ, and in place of these dark granules and oily particles in great number appear, one may doubt, whether we have to do with an inflammation or a destruction, an active or a passive process. But when, as he has shown recently in his paper on muscle and nerve regeneration in the *Deutsche Arch. für Klin. Med.*, in the further progress of this affection of muscle the granules and oil-drops disappear, and the clear basis-substance in which they were embedded shows itself as a nucleated protoplasmic mass, the so-called nucleated muscle-plate—in which around every single nucleus new transverse striation appears until the entire muscle-plate is striated, then this is a regenerative inflammatory process of parenchyma. If in a nerve the medullary sheath and axis-cylinder be destroyed, and the inside of Schwann's sheath become filled with myelin and fat, the appearance of



which expresses the complete destruction of the nerve, if these then disappear so that the nuclei of the nerve-fibre revert to an ordinary protoplasmic mass, and out of this new axis-cylinders be formed, this is a parenchymatous inflammation leading to regeneration. He infers a similar relation for parenchymatous hepatitis, based on a large number of experiments with phosphorus, as well as for parenchymatous nephritis, from the above observations on ligature of the ureter. Collating these facts with his clinical observations, he has come to the conclusion that diffuse interstitial nephritis and hepatitis follow parenchymatous inflammation of the same organs. If the liver or renal epithelium become diseased in consequence of a similar irritation, and this is not of such a degree that the entire organ is destroyed, or when a moderately intense irritant acts for a longer time, a change takes place which in no way leads to destruction, except in so far as this is the consequence of the entrance of numerous cells into the surrounding parts, and the new formation of connective tissue.

R. SAUNDBY, M.D.

#### TRÉLAT ON SYPHILITIC STRICTURE OF THE RECTUM: RECTOTOMY BY A NEW OPERATION.

IN a clinical lecture reported in *Le Progrès Médical*, June 22, 1878, M. Trélat relates the particulars of a case in which he practised division of a stricture of the rectum.

The patient was a woman (age not mentioned), who had been operated on by M. Trélat in 1873. The exact nature of the operation then performed could not be ascertained, as the notes had been lost, but she had been completely relieved at that time. Towards the end of 1877 the patient began to suffer from pain in defæcation, together with a glairy yellow bloody discharge from the anus. Five months ago, fæces began to escape from an opening at the lower and back part of the vulva, which induced the patient to apply at the hospital for relief. On admission, the woman denied syphilis, but had the remains of a syphilitic rash, and had been taking syphilitic remedies under the direction of her medical attendant. On examination, the anus was found smeared with fæcal matter, and a bloody purulent discharge. Around the orifice were scattered elevated patches, and from the base of one of these ran a fistula, which communicated with the anal aperture by a short wide track. Other sinuses existed in the neighbourhood. Digital examination revealed the existence of a certain amount of contractile power of the sphincter. In the anterior wall of the rectum was a deeply depressed softened spot, in the centre of which was the orifice of a fistula, which ran towards the vulva. Behind, the tissues were softened and ulcerated. Above these, was the stricture, and, above this again, thickening of the bowel extended higher up. The walls of the lower part of the rectum were thickened and traversed by fistulæ. After general antisyphilitic treatment and the local application of glycerine of starch, with rhatany and catechu, for three weeks, improvement had taken place. This, however, proved to be only temporary, and a month and a half after the commencement of treatment the following operation was performed. A solid steel rod, having at its end a movable and sharp pointed kind of needle or shuttle (*navette*), carrying a thread, was thrust upwards, parallel to

and behind the rectum for a distance of about  $3\frac{1}{2}$  inches above the anus. By a slight see-saw movement of the handle of the instrument, the point was now made to perforate the wall of the rectum, and the needle was thus carried into the rectal cavity above the stricture. Another steel rod, the end of which terminated in a frame, over which a layer of caoutchouc was stretched (very like a laryngoscope of which the mirror has been replaced by an elastic membrane), was next introduced up the rectum through the anus, and the point of the needle was then firmly fixed from below upwards in the caoutchouc. The rectal rod was now withdrawn, together with the needle and thread. The posterior wall of the rectum, to a point above the stricture, was thus included in the loop. The thread was then replaced by the wire of the galvano-cautery, and division effected without the least loss of blood. The operation was performed on April 19. On the 28th, the patient was attacked by pneumonia, very soon complicated with erysipelas of the face, the starting point of which was a large specific ulceration of the nasal fossæ. Death occurred on May 8, without any local accident having followed the operation on the rectum.

M. Trélat remarks that the above was evidently a case of the affection described by Guérin, Verneuil, Fournier, and himself as tertiary syphilitic affection of the anus and rectum, or ano-rectal syphiloma. The disease is caused by a syphilitic neoplasm of a special nature and different from gumma. The existence of multiple fistulæ is significative, and their appearance is characteristic of their origin. They are perfectly dry, and do not furnish any discharge. The fistulous track cicatrises almost as soon as it is formed. It is often very short, and has then a punched out appearance. The fistulæ affect the portion of the rectum below the stricture.

With regard to the effects of medication, M. Trélat differs from Fournier, who thinks specific treatment useful only at an early stage. In two of M. Trélat's cases, the affection was already of old standing, but, under mercury and iodide of potassium internally, with the local application of glycerine, diminution of the neoplasm, desiccation of the fistulæ, and disappearance of pain took place, and these good results have been maintained.

ARTHUR COOPER.

#### ANATOMY AND PHYSIOLOGY.

POUCHET ON THE ORIGIN OF THE RED BLOOD-CORPUSCLES.—At the Biological Society of Paris, on March 2nd, M. Pouchet made the following communication on the origin of red blood-corpuscles. The "elementary corpuscles" of the blood were first noticed by Donné in 1840, who confounded them with the granules in chyle; in 1846 they were well described by Zimmermann; and recently they have been brought prominently forward by M. Hayem as the germs of the red blood-corpuscles. This function M. Pouchet believes he has demonstrated by experiment; as also that certain flattened elliptical bodies, larger than red blood-corpuscles, constantly found and till lately considered pathological, are intermediate forms between elementary and red blood-corpuscles. "Elementary corpuscles" are probably derived from leucocytes, by a cell-mechanism analogous to that by which the polar globules are expelled from the yolk. This theory is supported by

experiment, for, firstly, they have throughout their growth the same reactions with colouring matter as leucocytes have; and, secondly, in ovipara, leucocytes fix hæmoglobin at the expense of the surrounding serum (Vulpian), and in mammalia they show the same tendency (Semmer), so then "elementary corpuscles" will act similarly, if, indeed, they are really, as it were, outcast from the bodies of leucocytes. It is also supported by the mode of development of leucocytes themselves, which being at first small and uninucleated, come at last, by a process similar to the cleavage of the yolk about the time of the extrusion of the polar globules, to have, with increased size, first two and then four nuclei. The verification of this presumed origin of "elementary corpuscles" does not seem easy at first sight, leucocytes being in an abnormal condition as soon as withdrawn from the circulation. In his experiments, M. Pouchet placed part of the mesentery of a rabbit beneath the microscope, and compressed lightly a mesenteric vein. Soon leucocytes were observed to attach themselves to the vascular walls in groups, along with masses of elementary corpuscles, or one leucocyte might be surmounted by a tuft of elementary corpuscles; in such circumstances he frequently found that the adherent corpuscles already contained a considerable quantity of hæmoglobin. Without doubt, it might be objected that these corpuscles are always free when in circulation, and become agglutinated to the leucocytes, as may happen to the latter between themselves under various conditions. Still everything seems to indicate that it is not so, but that these corpuscles are direct rejections or emanations from the contractile bodies of the leucocytes.

TARCHANOFF ON PSYCHO-MOTOR CENTRES.—M. Tarchanoff, at a meeting of the Société de Biologie (*Progrès Médical*, July 6) made a communication upon the development of psycho-motor centres in different animals. According to Soltmann, in dogs and rabbits they do not appear until the tenth day, when the senses are developed; the action of external agents is therefore indispensable to their formation. Moreover, the brain presents, considerable chemical and anatomical differences, according as one examines it in the new-born or the adult animal. In those animals which possess from their birth the perfect exercise of their senses and locomotion, M. Tarchanoff has found that the brain is more developed and the cranial bones more resistant; the power of controlling reflexing movements, which the psycho-motor centres possess, exists soon after birth in these animals, though it is absent in the rabbit. In the former, excitation of the pneumogastric nerve arrests the movements of the heart, while in the latter it remains without effect. Anatomically the differences are still more marked; thus in the first the circulation in the grey matter is more developed, and this possesses pyramidal and giant-cells. The brain of the rabbit, slightly vascularised, contains few giant-cells and none pyramidal; moreover, the nerve-fibres are destitute of myelin. M. Tarchanoff explains these differences more by the intensity of intra-uterine nutrition than by the length of gestation. He has noticed that the administration of phosphorus accelerates the development of the psycho-motor centres in the newly born rabbit. The same results from keeping the head low, so as to produce cerebral hyperæmia. M. Duval thought different races of animals could not be compared; he considered the length of gestation more important

than M. Tarchanoff admitted; and M. de Sinéty remarked that the mode of insertion of the placenta must be taken into account.

ROBERT SAUNDBY, M.D.

PICARD ON THE ACTION OF MORPHIA ON THE HEART.—MM. P. Picard and Rebatel, at the Meeting of the Paris Société de Biologie, on May 4th, called attention to the action of the salts of morphia on the heart (*Gazette Médicale de Paris*). M. Picard has already pointed out some of the phenomena following the injection of chlorhydrate of morphia in the dog, especially the contraction of the pupil and dilation of the small vessels. He infers that the salts of morphia produce both phenomena by paralysing the sympathetic nerve. He now publishes the sequel of his researches, having further to note the coincident fall of the mean blood-pressure and retardation of the action of the heart. These facts are easily verified by placing a manometer in connection with an artery, and noting the blood-pressure and rate of the heart's beats before and after the injection of morphia. It must be observed that the retardation of the heart's action occurs in spite of reduced blood-pressure; if the fall of pressure occurred alone, a peripheral action of the vessels would explain it, but then there would be at the same time accelerated action of the heart so that only a direct agency affecting the heart can explain this phenomenon. The cause, then, must be stimulation of the inhibitory or paralysis of the motor nerves (leaving aside as inadmissible the action of morphia on the cardiac fibres). The question thus put is easily solved by the following experiment. Cut the pneumogastric nerves in a dog, and after a few minutes count the beats of the heart; then inject morphia; and it will be found that diminution of the action of the heart is still produced, notwithstanding the section of the inhibitory nerves. This experiment throws over the first and prepares us to admit the second hypothesis, namely, that morphia paralyses the motor nerves of the heart, as it does the sympathetic nerves of the vessels and of the iris.

GLUCK ON REGENERATION OF NERVES.—Dr. Gluck (*Virchow's Archiv*, Band lxxii) has recently conducted a series of experiments with reference to the healing of nerves after they have been cut. The sciatic nerve of fowls and the pneumogastric of rabbits were exposed and cut through, the results of the operation depending upon the subsequent relation of the cut ends to each other. Immediately after the section was made the nerve-fibres projected beyond the retracted sheath, and the myeline escaped. The cut ends were united during the next few days by a greyish-white translucent tissue. If a considerable portion (0.4 inch or more) of the nerve were removed, the intervening gray tissue became converted into a dense fibrous callus, no regeneration of the nerves occurred, permanent paralysis resulted, and the animals died during the subsequent five months. When, however, the cut ends were closely united, without the removal of a portion of the nerve, the results were quite different, being the more favourable the less the displacement. In certain cases where the nerve was simply perforated, longitudinal rows of fusiform cells, surrounded by abundant homogeneous intercellular substance, were found within seventy-two hours after the operation. These bridged over the interval between the cut ends, sometimes extending from a central to a peripheral fibre. After eight days the ends were united by non-medullated nerve-fibres, which slowly and



gradually became thicker. When the nerve was wholly cut across, and the ends united by sutures, the healing process took place in a similar manner, more time being required. Within eighty hours after the operation the wound was closed by a grey granulation tissue, in which, within a fortnight, spindle-cells arose, apparently from the nuclei of the neurilemma, and served to unite the cut axial fibres. A differentiation into axis-cylinder and myelinel apparently took place later within these cells. The author considers that the newly formed fibres arise from these large granular spindle-cells, which are to be regarded as of new formation rather than as outgrowths from pre-existing fibres. They resemble ganglion-cells rather than those of connective tissue.

The results of the histological examination were confirmed by physiological experiment, the time of the return of the function to the nerve-trunks corresponding with the appearances observed under the microscope.

### PATHOLOGY.

HÜNICKEN ON A SARCOMATOUS TUMOUR IN THE SPINAL CANAL.—Dr. Hünicken, of Brunswick (*Berliner Klin. Wochenschrift*, July) reports a case of this nature. A young lady, A. G., at the age of nine years began to suffer from a small hard swelling over the left mastoid process, which after three years' slow growth was finally removed by a surgeon. It returned after one year, and grew much larger, covering the mastoid process and the infra-auricular fossa to the size of half a goose's egg, and remained stationary at these limits; it caused at times a good deal of pain, and bled from granulations which had formed at the most prominent part of the tumour; the hæmorrhage had latterly become frequent, and conduced to aggravate the somewhat feeble condition of the patient, so that there was again question of some operative interference, which was negatived by the fear of a second recurrence, and by the seat of the growth, which had penetrated into the substance of the mastoid process. The patient bore her sufferings with great patience, and lent herself to the various modes of treatment suggested with great energy; but after having unsuccessfully tried a great deal of both scientific and unscientific aid, she finally contented herself with dressing the tumour twice a day with an indifferent plaster. In July 1876 she went to Harzburg to try the brine-baths, and made daily excursions among the mountains without feeling any fatigue. In the beginning of August she climbed the Burg mountain, and on the way down she felt a severe pain in her back, which compelled her to rest for some time, and it gave her father, who accompanied her, much trouble and exertion to get her home. The pain disappeared after a day's rest, but returned after attempting to walk; the patient, in consequence, returned home. Dr. Hünicken saw her first on the 2nd of September. Miss G. was then twenty-four years old, with a pale face, slenderly built, and badly nourished. She complained chiefly of feebleness in the lower extremities, great pain in the back, which passed down the thighs, and obstinate constipation. Supported by some one's arm, she was still able to move about her room; but the pains in the back, which were compared to cramps, were so severe at night that the patient shrieked for hours, and sleep was regularly dis-

turbed, unless narcotics or a morphia injection were used. By the end of October the feebleness in the lower extremities amounted to paraplegia, and the sphincters, first of the bladder, then of the rectum, lost their power; at the same time the sensibility of the lower extremities suffered, but never reached absolute anaesthesia; reflex excitability was notably diminished. The induced current employed for a long time remained without any effect; the electro-contractility of the muscles of the lower extremities was unimpaired, but the electro-sensibility was lost. Repeated examinations of the thorax, abdomen, and genital organs shewed complete integrity of these parts. Although at the commencement of the disease the high degree of sensitiveness of the patient and the indefinite character of the affection caused hysterical paralysis to be thought of, the subsequent rapid increase in the symptoms, as well as the absence of any other facts which could be brought into causal relation with the present condition, led the author to believe that there existed some lesion, involving the totality of the spinal cord, which more or less deprived the nerves of the lower extremities of their functions. As myelitis might be excluded by the absence of all feverish symptoms, and the exclusive limitation of the paralysis to the lower extremities, the pressure of a tumour in the spinal canal was thought of, and its seat seemed most probably about the level of the last dorsal vertebra; the entire course of the case, at least in the last three or four months, had no resemblance whatever to fracture of a vertebra, which causes death in about a month. To the above symptoms, which were relieved by Dover's powder, or morphia injections, at the end of November was added a bedsores, which, beginning first in the left labium, and later at different parts of the nates, gave rise to large sloughs, five to fifteen centimetres in diameter; and it was only by keeping the patient in a warm bath for hours daily, that her existence could be made tolerable. The excessive suppuration which followed these numerous bedsores, as well as the loss of blood from the same cause, led to great exhaustion, and at length, on the 17th of March, the unhappy patient was relieved from her sufferings, seven months after the commencement of her symptoms.

The necropsy, which was restricted to opening the spinal canal and extirpating the tumour of the neck, gave the following results. On opening the spinal canal at the upper end, no microscopic change was noted until the tenth dorsal vertebra was reached; here the canal widened out to the size of a hen's egg, and contained a tumour of that size, which had encroached on the substance of the bodies of the tenth and eleventh dorsal vertebrae, which only retained their lateral portions; the middle had disappeared right up to the *fascia longitudinalis*, and the finger could be passed through this thinned fascia right into the abdominal cavity. The cord was compressed flat between the tumour and the posterior wall of the canal; the membranes were unaltered, and the cord itself, except for the flattening, showed no change to the naked eye, except some slight softness. In the deeper-lying parts of the vertebral canal there was no pathological change, and the cord had resumed its normal appearance. The tumour was easily loosened from its surrounding, slightly adhered to the dura mater by a delicate membrane, and possessed in the centre a pap-like, in the periphery a more consistent, substance, which under the microscope proved to

be a cell-sarcoma (*zellensarcom*). The tumour in the neck was of harder consistence, was also a cell-sarcoma, and penetrated the mastoid process as far as the mastoid foramen. After fifteen years, the sarcoma of the neck had given rise to a secondary deposit in the tenth dorsal vertebra, and seven months after the appearance of the symptoms caused death. As an etiological point, it remains to be said that the mother of this patient had suffered for many years from tuberculosis, and she died of this disease a month before her daughter.

WIEGARDT ON MALIGNANT LYMPHOMATA.—Dr. Wiegardt, of Warsaw (*St. Petersburg Med. Wochenschrift*, March 16) relates a case of malignant lymphoma of the lumbar retro-peritoneal glands in a man thirty years of age. Death occurred from exhaustion four months after admission to the hospital. At the necropsy the lymphatic glands of the neck and axilla, the bronchial and lumbar glands, were greatly enlarged, pale, and soft. In the anterior wall of the left ventricle of the heart there was a round tumour, about  $2\frac{1}{2}$  centimetres in diameter, soft, pale, and sharply defined by colour and consistence from the surrounding parts, but without a capsule. Near the apex, and in the left border of the heart, was a second tumour, as large as a nut, and another, as large as a walnut, was situated in the posterior wall of the heart; finally there was a little nodule the size of a pea in the wall of the auricle. The pancreas was enlarged, yellow-coloured, and soft. The retroperitoneal glands formed a large irregular tumour, 19 centimetres ( $7\frac{1}{2}$  inches) long, by 12 centimetres ( $4\frac{3}{4}$  inches) wide, and 8 centimetres (3 inches) thick, formed of masses up to as large as a goose's egg, matted together by dense fibrous tissue. There was no caseation nor softening. The consistence of the tumours was generally soft, and their cut surfaces were moist, smooth, greyish white or pale grey red. Some were somewhat harder, and their sections were more yellow coloured. The spleen was double the normal size, hard, and dirty brown on section; the trabeculae were strongly marked; the pulp was not easily removed, and the capsule was thickened in places. The left kidney was about half as hard again as normal, and contained in its cortical substance many tumours, from the size of a pea to a nut, which in places projected on the surface, in other places penetrated the medullary portion. The right kidney was somewhat larger; it contained fewer, not more than twenty, tumours, most of them of the size of a pea and smaller; four were as large as a nut, and one as large as a walnut. The entire left iliac fossa was filled with a nodulated new growth, about 4 or 5 centimetres thick; the tumour involved the whole thickness of the ilium, but it was sharply defined from the bone-substance, which was very porous, soft, and brittle. The outer surface of the ilium was not altered. The other pelvic bones were normal. The marrow of the femur, humerus, the sternum, and ribs showed no change. The white blood-corpuscles were not increased; they were rather fewer, in fact.

The structure of the tumour presented on microscopical examination the usual appearance of small round cells, like lymph-corpuscles, pale, with slightly granular protoplasm, and one nucleus, seldom more. These cells were embedded in a delicate reticulum of these fine fibres, which could be made visible by brushing or shaking out the cells. The new growths under the microscope were not so sharply limited off from the healthy tissues as they appeared to the naked eye; they grew peripherally, and extended

in the interstitial tissues of the organs. In the pancreas there were found at first small groups of round cells between the acini, which rapidly increased in numbers so as to atrophy the latter, which lost their proper coats, became converted into small heaps of lymphoid cells, and finally disappeared. Very similar changes occurred in the urinary tubules of the kidney. In the heart, the muscular fibres near the tumours lost first their transverse striation, became granular, then smaller, finally fibre-like, and then completely disappeared. In a similar manner the trabeculae of bone in the ilium were atrophied and compressed by the extensive new growth. At the border of a spiculum of bone one saw often curved notches, frequently with secondary notches, like Howship's lacunae, filled with closely packed round cells. More frequently the bone-capsules were enlarged, and contained an enlarged cell strongly coloured by carmine, sometimes lying against the wall, sometimes lying free in the centre, here and there also many cells having the appearance of the second; so that one is led to believe that they took part in the new growth, although no distinct trace of division or multiplication could be found. These widened lacunae in places coalesced to form still larger spaces in the bone. Another mode by which the bone was destroyed was by the infiltration of round cells between the trabeculae of bone, compressing them, and converting them into smooth spindle-shaped fibres, and finally into connective tissue. The tumour was a very characteristic example of malignant lymphoma. Beginning in a group of lymphatic glands, it had completely the characters of hyperplasia, not extending beyond the glands to their surroundings, but extended from connective tissue and along it, showed no tendency to retrograde changes, no caseation nor softening, extended from the lymphatic glands and forming metastases finally. To all appearance, we are entitled to regard the retroperitoneal and mesenteric glands as the seat of the primary lesion; but this seat of origin is very rare. Most authors give the glands of the throat and neck, or less commonly those of the axilla and mediastinum, as the general places of origin. Lücke gives the lumbar glands, the retroperitoneal and mesenteric glands, and Billroth and Dickinson give cases in which these glands only were affected. Some years ago the author saw a similar case in the Ivangorod military hospital; the abdominal tumour was as large as a child's head, and the lumbar glands were only affected. The metastasis to other organs is not common, and the regions in which these occurred are not generally those in which they are met with. Usually they are in the liver and spleen, which in this case were free. Metastases in the kidneys are rare; Wilks, Wunderlich, and Hüttenbrenner have described them. The author knows of no case of secondary growth in the pancreas, except the one recorded by Hüttenbrenner. Metastases in the heart have been described by R. Mayer and Murchison. He has been able to find no case of metastasis in bone. Tommaso Crudeli has described a case of diffuse, not leukæmic, lymphoma of the skull and other bones, which, however, does not belong here, as the tumours grew from the periosteum, and did not affect the bone itself.

SENATOR ON AUSCULTATORY PHENOMENA OF THE ARTERIES.—Dr. Senator (*Berliner Klinische Wochenschrift*, May 27) draws special attention to the pathological conditions under which the heart's



sounds may be heard in the peripheral arteries. These are insufficiency of the aortic valves, with dilated and hypertrophied left ventricle; pure insufficiency of the mitral valve; perhaps pure patency of the ductus Botalli. Then cases in which the arterial system is relaxed, but the heart's muscle acts strongly (anæmia, chlorosis, fever, stenosis of the aortic or mitral valves, with hypertrophy of the left heart). After these come cases of great obstruction at the origin of the aorta, general increased tension of the middle-sized arteries, or congenital narrowing of the arteries, if the left ventricle at the same time is degenerated and little capable of performing its function. The pathogenetic condition he considers to be such a state of the arterial wall as shall enable it to be set in vibration. He recommends the solid stethoscope as making the sounds more audible in some cases.

ROBERT SAUNDEY, M.D.

ALBRECHT ON A METHOD FOR THE MICROSCOPICAL EXAMINATION OF BLOOD FOR SPIRILLA.—Dr. R. Albrecht (*St. Petersburger Med. Wochenschrift*, June 1) recommends the following method for examining the blood for spirilla in relapsing fever. Spread out a drop of blood on a slide, not too thin; let it dry; treat it with a drop of acetic acid, and repeat it in a few seconds. By this means all the fibrin and blood-corpuscles will be destroyed and dissolved, and after careful washing away of the acid with distilled water, and final drying, the preparation is ready for use. With a little care in washing, which must not be in a stream, the spirilla are not lost, especially if the preparation has been dried for six to twelve hours before being treated with acetic acid. The glass slide then looks quite transparent, and at the place where the drop of blood was it looks a little dusty. Under the microscope the nuclei and nucleoli of the white blood-corpuscles are visible, and between these the spirilla lie in great numbers and in the most distinct arrangement and position, showing up very beautifully and distinctly. They give the impression of being thicker than they generally are, probably because they are no longer embedded in a highly refracting substance—plasma. Preparations made in this way are best kept dry, but if they are to be mounted in balsam or glycerine they must be stained with some aniline dye (violet or brown) as recommended by Koch. He thinks this method may be applied to the preservation of microscopical preparations of many other organisms of pathological interest.

DUJARDIN-BEAUMETZ ON A REMARKABLE CASE OF SPHACELATION OF THE STOMACH.—Dr. Dujardin-Beaumetz lately presented the notes of this case to the Medical Society of Paris (*L'Union Médicale*, February 23). The patient, aged forty-seven, entered his wards on October 19. Five days before, whilst in excellent health, and without appreciable cause, he had had an hæmatemesis, accompanied by acute pains in the stomach. Examination revealed no epigastric tumour. He bore milk-diet very well, and without vomiting. The patient spoke of a stomatitis from which he was then suffering, but said that every year about that time he was troubled with aphthous sore mouth. Dr. Dujardin-Beaumetz did not believe that this affection was similar to his previous attacks, and did not know to what the ulcerations of the lips, the under surface of the tongue, the uvula, and even the borders of the epiglottis were to be ascribed.

On October 28th, the patient, who up to that time was progressing well, hardly complaining of any pain, never having vomited, and demanding solid nourishment, died suddenly, after having experienced an acute pain in the stomach, and ejected a few spoonfuls of blood.

At the necropsy, Dr. Dujardin-Beaumetz found almost the entire stomach, the pyloric region excepted, sphacelated through all its thickness, and transformed into a soft eschar, which occupied not only the stomach, but also the diaphragm and omentum. On removing this mass, the lungs, liver, spleen, and intestines were exposed to view. In presence of such destruction, the idea of simple ulcer had to be put aside, and the entrance into the stomach of a caustic liquid had to be admitted. This *post mortem* diagnosis explained perfectly the peculiar sore mouth. After closely questioning his wife, it was discovered that he had been very despondent from want of work, and that he feared poverty for his wife and children. On the 14th he had gone to the water-closet, and on coming out he fell almost inanimate to the ground, crying in haste for water to quench the burning in his stomach. Thus this patient concealed from every one his attempt at suicide, and was able during fourteen days to pre-preserve the appearance of health and the integrity of his digestive functions, while the greater portion of the walls of the stomach was destroyed, and succumbed only on the separation of the slough.

WENDT ON TRICHINOSIS.—Dr. Edmund C. Wendt (*American Journ. of Med. Science*), has contributed a paper to the literature of trichina infection, in which he states that encysted trichinæ may for a series of years give rise to severe muscular pain, of pseudo-rheumatical character, and that the muscles may undergo permanent degeneration.

CROOKE ON BACTERIA IN PYÆMIC BLOOD.—The following account of a microscopic examination of the blood in a well-marked case of pyæmia is published by Mr. G. P. Clarke in *Guy's Hospital Gazette* for July.

An examination of the blood in the ordinary way was made just after the appearance of a second metastatic abscess (superficial in character), when bacteria of three different forms were undoubtedly present, exhibiting active movements.

The second examination was conducted with greater precaution. The patient's finger was thoroughly cleansed by washing with carbolic lotion (1 in 20), the slides and covers were steeped in strong sulphuric acid, and then washed in fresh distilled water, a clean carbolised needle being used. An examination was afterwards made in conjunction with Dr. Greenfield, who, as a member of the Pyæmic Committee of the Pathological Society, came specially to see the case. The same precautions were taken as to the cleanliness of the slides, covers, etc., but the blood was taken from the lobe of the ear which was first cleansed with absolute alcohol. This examination was made two or three days after a third metastatic abscess had been opened. Another examination was made in a similar way by Mr. Crooke.

In all the examinations bacteria were found. The free bacterium *termo* was most commonly met with (small dumbbells); angular bodies with bulgings or knobs at the angle and at each end were also seen; these were perhaps a larger kind of bacterium *termo*.

Straight moniliform bodies were also seen (*vibrio*),

and a peculiar form, larger than the previous ones, very much like the bacterium No. ii., described by Professor Lister in his article on *Bacteria and the Germ Theory*, in volume xiii. of the *Quarterly Journal of Microscopical Science*. The lenses employed were  $\frac{1}{12}$  immersion by Ross, and Nos. 9 and 10 immersion of Hartnack.

### RECENT PAPERS.

Tuberculosis of the Lymphatic Glands. By M. Cornil. (*Gazette Médicale de Paris*, July 20.)  
 Note on Dermo-Epidermic Grafts in Different Human Races. By M. Maurel. (*Gazette Médicale de Paris*, July 20.)  
 Recent French Researches on the Pathological Anatomy of Pulmonary Phthisis. By M. Balger. (*Gazette Médicale*, July 13.)

### MEDICINE.

LIÈGEOIS ON CEREBRAL LESIONS OCCURRING IN THE COURSE OF ACUTE ARTICULAR RHEUMATISM.—Dr. Ch. Liègeois communicates a paper on cerebral rheumatism to the *Revue Médicale de l'est*, March 1st, 1878.

Under this term, "cerebral rheumatism", has been included by various writers every morbid cerebral condition which may occur during the course of acute rheumatism. Six clinical forms of this condition are admitted by Trousseau, which at once shows how various are its manifestations. Many and various anatomical lesions have been described as productive of this condition; some, following Trousseau, have recognised in cerebral rheumatism a pure and simple neurosis, while certain cases have been explained as due to embolism and congestion of the nervous centres. Others, as Musgrave and Sauvages, think that acute hydrocephalus accounts for the apoplectic form. M. Jaccoud considers that cerebral embolism and meningitis account for some of the cases, while others are due to punctiform meningeal hæmorrhages or hydrocephalus; while, in a certain number of cases, necropsy reveals no visible lesion.

The author expresses his own opinion that, "the cerebral lesions occurring in the course of acute articular rheumatism are, in some cases, the consequence of insufficient action of the heart, caused by parenchymatous degeneration and alteration of the organ, due to pericarditis". He cites, in confirmation of his views, a case of multiarticular rheumatism; on the eighth day of which there was an attack of eclampsia lasting five hours, during which time the temperature was not above 37° Cent. (98.6° Fahr.) The articular rheumatism continued its course and attacked fresh joints. Quantitative analysis of the urine excluded the idea of uræmia. A fortnight after the attack of eclampsia, it was noted that the sounds of the heart were very indistinct, the pulse frequent and often irregular, while his face was cyanotic. The patient died four days after the last note was made.

At the necropsy, there was found dry pericarditis with numerous adhesions, and myocarditis of the left ventricle, characterised by the pale colour of the muscle and its friability. There were no valvular lesions. There were fibrinous clots in the ventricular cavities, some old, others recent. There was basic broncho-pneumonia in the second stage; and slight pleuritic effusion. The examination of the brain was forbidden.

The author of the paper, setting aside the old idea of "retrocession or metastasis", thinks it more probable the diminution of pain or its disappearance at the time of the development of cerebral disorders, is only the result of a cerebral disturbance, which prevents the perception of pain. In the above case, a subsidence of articular pain occurred two days before the convulsive seizure.

The question is then discussed, what was the nature of the lesion of the nervous centres? As the brain was not examined at the necropsy, it is obvious that no satisfactory answer can be given. Cerebral embolism appeared improbable, as there was no valvular lesion in the heart, and no ulcerative endocarditis was found. The idea of cerebral meningitis is combated on the grounds that the temperature remained at 37° Cent. during the attack, while the prodromal stage of meningitis, as characterised by cephalalgia, vomiting, and agitation, was absent. The probability of meningeal ecchymosis is improved. The idea of simple delirium appears to Dr. Liègeois unworthy of discussion, and he reverts to his previously expressed opinion as to the cause of the cerebral symptoms. The subject is to be continued hereafter.

FRANCIS WARNER, M.D.

SHEPHERD ON PULMONARY CONSUMPTION.—Dr. A. B. Shepherd has recently published the lectures delivered by him before the College of Physicians on the Natural History of Consumption. The leading points laid down by him are as follows.

Phthisis is in all cases due to a primary inflammatory lesion. In saying this, he does not mean to imply that tubercle is never present in the lungs, for it may occur under two conditions; (1), as the primary lung-lesion in the course of acute miliary tuberculosis; (2), as a secondary product in late stages of phthisis due to injection from a cheesy mass in the lung. He refuses, however, to admit the former of these conditions into the category of pulmonary consumption; and the latter is evidently merely a result of consumption.

He divides the inflammatory disease into three varieties, according to the seat of the inflammation; (1), catarrhal proliferation of the epithelium of the air-cells leading to occlusion, and, eventually, to destruction of the air-cells and minute bronchi; (2), primary disease of the walls of the alveoli and bronchi, the result, as a rule, of chronic bronchitis and emphysema; (3), primary hyperplasia of the interstitial connective tissue of the lung resulting in fibroid phthisis. He traces fibroid phthisis to three causes; alcohol, syphilis, and anthracosis.

As regards the pathology of tubercle, Dr. Shepherd considers it a disease of lymphatic tissue invariably due to absorption of, and infection by, matter from pre-existing cheesy deposits in any part of the body. He considers the miliary granulations to be due to the presence of perivascular and peribronchial cords of adenoid tissue. He attaches no specific importance to the giant-cells, and he agrees with Dr. Klein in looking upon this as an epithelial cell growing under certain conditions.

W. ALLEN STURGE, M.D.

KATZ ON A CASE OF HYDATID TUMOUR OF THE LIVER BURSTING INTO THE AIR-PASSAGES: RECOVERY.—In the *Berliner Klinische Wochenschrift* for June 24, Dr. Katz of Berlin relates the following case.

The patient, a school-teacher, had suffered for the last five or six years from disordered digestion, with



occasional attacks of jaundice. When he came under observation, a fluctuating tumour as large as a child's head was found in the epigastric region. Further examination, and the history of the case, pointed to its hydatid nature, and it was opened, when about five litres of an intensely fetid yellowish fluid were evacuated, containing hundreds of echinococci, varying in size from a cherry to a fowl's egg. Immediately after this, and during the following six weeks, the patient's health improved; but then jaundice and fever returned, and, eight weeks after the operation, there was found a swelling on the right side of the thorax at its lower portion. At the same time, there was great emaciation, with frequent rigors, and the general symptoms of pyæmia; but the patient refused to undergo another operation. Suddenly one day, and after a violent fit of coughing, about two litres of a greenish offensive pus were expectorated, and, during the following days, about the same quantity was coughed up from time to time. The microscope showed this fluid to contain the characteristic echinococcus-hooklets in large numbers. The patient's condition again immediately improved, and in three weeks recovery was complete. The second tumour, which was situated in the posterior part of the right hepatic lobe, probably became adherent to the diaphragmatic pleura, and pushed up against and displaced the right lung, where, owing to the concussion of coughing, it burst into the bronchi.

W. J. TREUTLER, M.B.

**GREEN ON HEPATICO-BRONCHIAL FISTULA.**—A case of this very rare affection is reported by Mr. W. E. Green in the *Lancet* of July 1878, p. 5. So far as Mr. Green knows, only two similar cases are to be found in medical records, one being mentioned by Dr. Murchison in his work upon *Diseases of the Liver*; and another described by M. Laboulbène (see *Lancet*, vol. ii, 1875, p. 504). The latter was analogous to Mr. Green's case. In Dr. Murchison's case, however, the fistula extended only to the pleura, and was not discovered until after death.

The patient, an innkeeper, aged 63, a well-nourished active woman, had suffered for many years from attacks of biliary colic. On May 16th, 1875, she was attacked with general malaise, followed by severe pain behind the right shoulder, slight cough, expectoration containing small clots of blood. Auscultation revealed nothing to account for this. Pulse 76; temperature normal.—May 20th. She coughed up some green bitter fluid. She felt better.—May 21st. The patient was bringing up large mouthfuls of frothy bile, and this had been going on for hours. Pulse 108; temperature normal. The base of the right lung was dull on percussion, and large bubbling *râles* were heard, as though passing upwards from the liver, on each inspiration. The bowels were open, with bile in the fæces. The patient continued expectorating large quantities of bile (often more than 80 ounces in the 24 hours) until June 10th, when she vomited about a pint of most offensive pus, and felt better. Pus mingled with bile was expectorated in greater or less quantities until the 26th, during which period the general health had improved, appetite fair, motions natural.—On July 12th, she again, after very troublesome attacks of coughing, brought up a large quantity of pus; after this, the patient improved, the cough and expectoration gradually ceased, and, in the second week of August, she left home for a change, returning, after three weeks' absence, quite well.

**CAMERON ON THE OCCURRENCE OF A PUSTULAR ERUPTION IN PYÆMIC CASES.**—Mr. H. C. Cameron relates (in the *Lancet*, July 1878, p. 65) two cases of this apparently rare complication in pyæmic cases. A young woman was admitted into hospital, with well-marked anthrax of the lower lip on October 10, 1876, and died Oct. 12. On admission, there were no cutaneous symptoms; but, on the 11th, the body and extremities were covered with sudamina, and numerous small purpuric spots, that did not disappear on pressure. Very soon the sudamina became purulent.

In another case, admitted on May 3rd, 1877, a young girl, aged 10, had the great toe severely crushed three weeks previously. Acute peritonitis followed. Over the whole surface of the body an eruption, precisely similar to that in the previous case, existed, which quickly became pustular; and, before her death, the body was covered with pustules of very considerable size. Dr. Foulis, who conducted the *post mortem* examination in each case, was of opinion that the pustular eruption was due to capillary cutaneous injections.

[This pustular eruption and purpuric exanthem accompanying pyæmia is ably treated by an anonymous contributor in the *Gazette Hebdomadaire*, No. 46, 1868. The conclusions at which he arrives are these. 1. In cases of pyæmia, the skin becomes the seat of various exanthematous eruptions. 2. This symptom is rare, if one may judge from the silence of authors; it is the *avant courier* of approaching death. The late Dr. Anstie reported in the *Lancet*, January 1870, p. 117, a singular case of spontaneous pyæmia occurring in a scullerymaid aged 20, admitted Sept. 10th, 1869, with pain in her joints, that had existed several days. Temperature 101° Fahr. Sept. 12th. On the right side of her face were a couple of red spots. On the 13th, over the face and body were a number of bullæ and pustules in various stages. Temperature 104°. The left knee was much swollen, also the dorsum of the right hand. On Sept. 14th, the pustules and bullæ were still more numerous. Death occurred at 5 P.M. The *post mortem* examination threw no light upon the origin of the pyæmia, which, Dr. Anstie thought, must have arisen from the foul atmosphere in which the patient lived.—*Rep.*]

**BUZZARD ON BLEPHAROSPASM SUCCESSFULLY TREATED.**—Dr. Thomas Buzzard reports an interesting and instructive case of this affection in the *Practitioner* for June. A married man, aged 53, two months before consulting Dr. Buzzard, was suddenly attacked with spasmodic twitching of the left eyelid. His general health was perfect, and no cause could be assigned for the attack. Pressure over the left tragus, and upon the skin for an inch in front of it, caused the spasms to cease for the time, but they recurred with extra violence when the finger was removed. The left ear was found filled with wax, which was at once removed. A weak constant current was applied; one rheophore behind the outer canthus, and one in front of the tragus, with immediate good results. One or two further applications of electricity, and a blister behind the ear, completed the cure.

It was difficult to allot the degree of utility due to each of the different steps of treatment adopted. The most important, probably, was the removal of the wax, and possibly this might have proved, eventually, sufficient to cure; but the spasms did not alter after its removal until the continuous current was

applied, and, therefore, the rapidity of relief must be, in some measure, ascribed to Voltaism; the blister, too, bore no unimportant part in allaying the nerve irritability.

**LOW ON GOÏTRE AND THE HÆMORRHAGIC TENDENCY.**—Dr. R. Bruce Low (*British Medical Journal*, June 1878, p. 932) refers to the frequency with which flooding attacks lying-in women in the goitrous districts. In 90 cases of labour, 31 patients were found to be habitual flooders, and, during the menstrual epoch, many others were subject to menorrhagia.

[A series of microscopical examinations of the blood in goitrous patients, showing the great excess of the pale, and peculiar alteration of the red, corpuscles, explaining to a great extent the cause of this liability to hæmorrhage, were made by Dr. Holland and published in the *Microscopical Journal*, vol. i, p. 176; and also by the reporter in the *Medical Times and Gazette*, vol. i, 1854, p. 430.—*Rep.*]  
RICHARD NEALE, M.D.

**CHENERY ON DOUBLE RUPTURE OF THE JEJUNUM.**—At a meeting of the Suffolk District Medical Society (*Boston Medical and Surgical Journal*, May 23), Dr. Chenery reported the following case, which occurred in the practice of Dr. Hall, of Sheepscot Bridge, Maine.

In the evening of November 1st, 1877, Dr. Hall was called to see a young man, nineteen years of age, a farmer, and found him suffering most severe pain over the whole abdomen, with pulse 130, weak and thready, and temperature 99° F. The abdomen was tense and somewhat tender, but the tenderness was not more marked in any particular spot. A natural passage from the bowels had taken place.

He was a remarkably large, healthy-looking man, with no taint of inherited disease, and had always enjoyed good health up to within six months of this time, when he began to suffer from occasional attacks of colic, which were relieved by carminatives and warm applications.

During the forenoon of November 1st, he was engaged in ploughing a rough piece of ground. About eleven o'clock he stepped into a hole and received a severe shock. He felt "something hurt him" in the bowels, but continued his work until noon. When he came in to dinner, he felt sick and could not eat anything. In the course of an hour, there was severe pain in the abdomen and vomiting every few minutes. Pain and vomiting continued in spite of ordinary remedies which were employed, till Dr. Hall was summoned in the evening. He immediately injected one-fourth of a grain of sulphate of morphia subcutaneously, and followed it with the same dose in half-an-hour; this procured some relief. Hot cloths sprinkled with oil of turpentine were applied to the abdomen, and a mixture containing creasote was given for the vomiting. He took eight grains of sulphate of morphia within the next twenty-four hours without any effect beyond a slight relief from the pain. The case was regarded as acute peritonitis from exposure to cold while he was overheated. Death took place about twenty-nine hours after he felt the sudden pain, after stepping into the hole.

A necropsy was made twenty hours after death. There were no external signs of wounds or bruises. The abdomen was extremely tense. On opening the abdominal cavity, a large amount of very fetid gas escaped. In the umbilical region, a mass of in-

testine as large as the two hands was seen, almost black, and very much swollen. This was the lower portion of the jejunum, six feet in length; and the intestine and corresponding mesentery were much congested. At the lower end of this portion was a rent through all the coats of the intestine, as large as a copper cent piece. The edges were thin, and presented the appearance of having been shaved off from the inner surface to the outer. These edges were ragged and easily torn, but could not be adjusted to each other. The opening appeared as if a piece had been detached. There was no pus or other sign of localised ulceration. Three inches above this was a second opening as large as the extremity of the little finger, and having precisely the same characters as the first. The intestine was filled with thick blood. The abdominal cavity contained two quarts of serum mixed with blood and the normal intestinal contents. The other organs were healthy.

#### RECENT PAPERS.

- A Case of Interrupted Speech. By Dr. A. Frey. (*Berliner Klin. Wochenschrift*, July 22.)  
Remittent Fever with Phlyctenular Eruption. By Dr. E. Gerhardt. (*Wiener Medizin. Wochenschrift*, July 13.)  
On the Isochronous Development of Two Acute Exanthems. By Dr. J. Matray. (*Ibid.*)  
Acute Hypertrophy of the Laryngeal Mucous Membrane. By Dr. K. Störk. (*Ibid.*, July 20.)  
Phthisis in the Paris Hospitals. By M. Graucher. (*Gazette des Hôpitaux*, July 27.)  
On Lymphitis and Cancerous Adenitis. By M. Louis Jullien. (*Lyon Médical*, July 26.)  
Bronchial Dilatation: Death: Necropsy. By M. J. Gaul. (*Lyon Médical*, July 28.)  
Acute Progressive Muscular Atrophy following severe Diphtheria; Rapid Cure by Electrotherapy. By Dr. G. De Vecchi. (*Annali Universali di Medicina e Chirurgia*, July.)  
On Spasmodic Spinal Paralysis, or Spasmodic Tabes. By M. Recklin. (*Gazette Médicale de Paris*, July 20.)  
Note on Arthropathies Consecutive on Acute Changes in the Medulla. By Dr. Vallen. (*L'Union Médicale*, July 23.)  
Note on a Case of Sudden Death from Pulmonary Embolism, supervening in the course of a Thrombosis, brought on by a voluminous Cystic Uterine Myoma. By Dr. Duguet. (*L'Union Médicale*, July 11.)  
The Identity of Spontaneous and Traumatic Erysipelas. By M. Alix. (*Lyon Médical*, July 14.)

#### SURGERY.

**UHDE ON SOME SURGICAL CASES.**—Dr. Uhde, Surgeon to the Grand Ducal Hospital in Brunswick, gives in the *Deutsche Medicinische Wochenschrift* for April 27, an account of some interesting cases in his practice.

**CASE I. Genu Valgum: Ogston's Operation.**—A smith, 19 years old, had gradually acquired during his work a high degree of this deformity. The right knee was affected. The leg formed externally an angle of 140° with the thigh. The internal condyle projected an inch beyond the external; the patella was displaced, and the tibia rotated outwards. The foot also had assumed an extreme valgus position. The deformity disappeared on flexing the knee. The operation suggested by Dr. Ogston was performed on January 20, 1878, but the external lateral ligament had to be cut before the limb could be straightened. The patient recovered without difficulty of any kind.

**CASE II. Fracture of the Patella: Iron Wire Suture.**—A big-bellied man, aged 21, broke his patella transversely across by falling backwards. A large amount of separation took place. Malgaigne's hooks could not be efficiently applied, on account of the thick layer of subcutaneous fat. A year after the



first injury, the man fell again, and ruptured the connection between the fragments. The joint became full of blood, and the fragments were found to be separated nearly two inches.

On February 25, 1878, Esmarch's bandage being applied, an incision nearly five inches long was made in its long axis over the extended limb, and the fragments exposed. The fibrous tissue was removed from the surfaces of the fracture by the sharp spoon and knife. The fragments were then drilled in two places, and strong iron wire was introduced through the holes, by means of which the fragments were slowly approximated, after the joint had been first washed with a 5 per cent. carbolic acid solution. The wound was united with catgut, except where the wires emerged; here two fine drains were introduced. A posterior splint was used to steady the limb. Antiseptic precautions were employed throughout. Two days later, the dressing was changed, because it was soaked with blood. Four days afterwards, the wound was found to be united *per primam intentionem* save where the wires came out, and the knee-joint showed no sign of trouble. On the fourth day, the temperature rose to 39° Cent. (102° Fahr.), then fell gradually until the seventh down to 36° Cent. (97° Fahr.), and then remained normal. At one time it appeared as if the wires would heal in, but later some irritation appeared, and they were cut out on April 9. The operation was attended by a complete success. The result, however, as regards function of the limb, is not mentioned.

CASE III. *Partial Gangrene of both Feet from Frostbite: Tetanus: Lisfranc's and Chopart's Operations: Comparison of Thymol and Carbolic Dressing.*—A cachectic man, 47 years old, was seized with gangrene of both feet from frostbite on January 12, 1878. On the 4th February some symptoms of tetanus appeared, but from these he recovered under treatment on March 2. On March 18, Lisfranc's operation was performed on the right foot and thymol dressing applied, and then Chopart's operation was performed on the left foot, and carbolic dressing applied. More pain was experienced in the right stump; otherwise both wounds healed *per primam intentionem*.

[It is the reporter's experience that thymol often occasions much smarting pain, which continues some time after its application. A wound dressed under thymol spray smarts more than one treated with carbolic spray, although the latter is much the stronger.—*Rep.*]

CASE IV. *Compound Dislocation of the Right Humerus, Fracture of Right Femur, and Wounds of Lips.*—A carpenter, 27 years of age, fell, on September 15, 1877, from the top of a four-storey house. It was believed he attempted to break his fall by laying hold of something during his descent with his right hand, and that he dislocated the shoulder in this way. The right arm was extended in a nearly horizontal direction, and the head and neck of the humerus projected through a rent in the axilla  $3\frac{1}{4}$  inches long, and lay upon the external margin of the pectoralis major muscle. The form of dislocation resembled the subcoracoid rather than the subglenoid form. The articular surface of the head looked downwards, the lesser tuberosity forwards, the greater upwards and upwards. The long tendon of the biceps was not in the bicipital groove. The brachial plexus was stretched over the anterior aspect of the bone. On introducing the finger into the wound, the margin of the rent on the capsule was found extremely tense. Trusting in the power of antiseptic surgery, Dr. Uhde determined to reduce the dislocation. The

common extension method failed, no doubt from the tension of the capsule. When the arm was elevated, reduction was readily accomplished. A thorough disinfection of the wound with 5 per cent. carbolic solution was now carried out, and the arm fastened to a splint in an abducted position, the better to favour drainage.

On September 18, in the evening, the temperature was 100.5° Fah. In October, slight movements of the joint were possible. On November 3 the wound was completely healed; and when the patient left the hospital (date not specified), the arm was movable in every direction, and the man was capable of executing heavy work. A result such as this would scarcely have taken place under any form of treatment which did not ensure an aseptic condition of the wound. The recovery of perfect function in such a joint as the shoulder, or indeed in any joint after compound dislocation has taken place, is a surgical triumph.

WEINLECHNER ON SUCCESSFUL EXTIRPATION OF A CENTRAL OSTEOSARCOMA OF THE LOWER JAW, WITH PRESERVATION OF THE CONTINUITY OF THE BONE.—After a protest in favour of conservative surgery in operations for tumours of the lower jaw, on the score that many, especially those classified under the term *epulis*, do not involve the entire thickness of the maxilla, the writer (*Allgemeine Wiener Medizin. Zeitung*, May 21) narrates a case of fibro-chondroma of the upper and lower jaw, in which, after removal, it was found that the thickening of the lower jaw was produced by hyperplasia of the bone-substance, and that the removal of the entire thickness of the jaw, which had been practised, was not required in that particular case. Some time afterwards, a peasant boy, 18 years old, presented himself. Two years before, he had noticed in the vicinity of the first molar on the right side a painless tumour of the size of a small bean. The swelling steadily increased, and rendered mastication difficult. On admission to the hospital, the tumour was found to occupy the external surface of the lower jaw, from the lateral incisor to the second molar. It overlapped the teeth; the jaw was distended by the growth. The tumour was smooth, painless, and covered by the distended bone. The plan of operation consisted in removing the external lamella of the lower jaw, and then the tumour itself, leaving the internal table to give support to the parts, and to obviate deformity. An incision was therefore made along the ramus of the jaw, from the angle to the chin. After chiselling off the external covering of bone, the tumour was readily shelled out of a central cavity, connected with several diverticula so as to cause the tumour to resemble an arborescent lipoma in shape. The cavity was well scraped out, and then washed with a 20 per cent. solution of chloride of zinc. On microscopic examination, the growth proved to be a myeloid sarcoma (*epulis interna*). A very fair recovery followed, and, as the author points out, the result, as regards the function of the jaw, is immensely better than it could be were the entire thickness of the maxilla removed.

BIDDER ON A CASE OF DELAYED UNION OF FRACTURED LEG.—Dr. A. Bidder of Mannheim reports, in the *Deutsche Medicinische Wochenschrift* for May 18, a case of which the following is a summary.

Compound comminuted fracture of right leg; healing under scab; defective formation of callus; injec-

tion of lactic acid; massage; final consolidation under walking exercise.

Graf H., an officer 28 years of age, got his leg severely crushed between a tree and his runaway horse. In the middle of the shaft the tibia was broken in several places, over a space of eight centimètres. There was much blood extravasated, and a wound, leading to the seat of fracture, about three centimètres (1.2 inches) long. The first surgeon summoned washed the wound out with a two per cent. carbolic lotion, applied a splint, and extension, and bound the limb with lint dipped in the same carbolic lotion. Dr. Bidder first saw the patient twenty-two hours after the accident. He removed everything under chloroform, and examined the fracture, during which the fragments became displaced, and a large blood-clot was forced from the wound. It was again syringed out with five per cent. carbolic water; the limb was covered with a thick layer of salicylic wool and then replaced in the splint. Two days afterwards, some symptoms of fatty embolism of the lungs appeared, which subsided. On the third day the highest temperature 38.8 Cent. (102.84 Fahr.) was reached. The dressing was, however, not changed for three weeks, when the wound was found to be almost healed. A plaster of Paris bandage was now applied and allowed to remain for four weeks, but at the end of this period very imperfect union had taken place. Another plaster of Paris bandage was therefore applied for a space of three weeks, but with no better result. A third was then applied for seven weeks, but no more union took place. A water-glass bandage was now applied, and the patient encouraged to move about on crutches, to get into the open air, and improve his general health, while Dr. Bidder determined to try the local effect of injecting lactic acid, which P. Vogt and himself had found in certain animals to have a powerful influence on regeneration of bone. A ten per cent. solution of lactic acid, combined with a two per cent. solution of carbolic acid, was the medium adopted. With a hypodermic syringe this mixture was injected into the mass of callus, or between the fragments, and as close as possible to the seat of fracture. Thirteen injections were made during a fortnight without effect. The solution was now increased in strength to a fifty per cent. solution of lactic acid, with which three injections were made at short intervals. Considerable local reaction followed, and the limb was left undisturbed in the splint for ten days, after which it was found that the fracture had become distinctly more solid.

Massage was now employed daily to the limb, and warm foot-baths were used, after which the limb was each day again replaced in the splints, and the patient sent out of doors on his crutches. Phosphorus pills were also given. Every day during his walks the patient tried more and more to bear on the injured limb, which at first caused much pain at the seat of fracture; but, by the end of three weeks of this kind of treatment by exercise, the fracture was found to be fully consolidated. Ten months after the injury the patient was able to return home perfectly cured.

[The author is to be congratulated on the result of his endeavours. It does not, however, appear clear that the injections of lactic acid had much to do with it. Putting the limb in splints, in such a case, and setting the patient on his legs to hobble about, is a very old plan in England, and a very successful one too. The more interesting question appears to be how far the antiseptic treatment of such fractures is likely to produce delayed or non-union. There would appear to be no *a priori* reason for this, since the ut-

most a well-directed aseptic treatment can accomplish, is to convert a compound into a simple fracture, so far as the healing process is concerned.—*Rep.*]

WM. MAC CORMAC.

NEDOPIL ON SYMMETRICAL GANGRENE OF THE EXTREMITIES.—Dr. Nedopil of Vienna reports, in the *Wiener Medicinische Wochenschrift*, No. 23, 1878, a case under the care of Professor Billroth, of "symmetrical gangrene of the extremities", and states in his comments that, under this title, Raynaud described a form of dry gangrene, characterised in the first place by its being independent of any apparent anatomical change in the vascular system, and, in the second, by its always attacking the homologous portions of the two halves of the body; at either the two upper or the two lower extremities, or all four together, or occasionally both external ears, cheeks, or *alæ nasi*. The gangrene always follows, and is associated with, a condition of idiopathic local asphyxia, which latter, however, does not always terminate in local death, but frequently disappears or remains uncomplicated by further changes. The local asphyxia is presented in one or other of two forms. The affected extremities within certain limits become bloodless and very pale, or their surfaces may present swelling and lividity, due to sudden arrest of the supply of arterial blood, and to capillary stasis of the venous blood. These two conditions may occur either simultaneously or in succession in the regions affected with local asphyxia. The subject of this affection is usually a girl or young woman. As a result of some insignificant cause, the fingers or toes become cold and senseless. In repeated attacks, there is usually a definite sequence, the same digit being attacked first and the others becoming affected in the same succession. An attack of local asphyxia usually lasts but for a few minutes, but may be prolonged for several hours. In the more serious attacks, in which there is much venous hyperæmia, the patient complains of intense burning and darting pains. In most cases of well-marked local asphyxia, there are indications of periodicity in the occurrence of the attacks, the patient in each instance being affected at a certain season, or at a certain hour of the day.

Just as the whole organism may recover from temporary asphyxia and syncope, so in these forms of local syncope and local asphyxia the parts involved may regain their normal condition when the attack has passed off. When, however, the intensity and duration of such attack has passed beyond certain limits, death results, and, the flow of blood having been arrested for too long a period, the affected part becomes gangrenous. The gangrene, which commences usually with intense pain, does not always present the same form. The affected region may become mummified, as in senile gangrene, or it may present such changes as are usually observed after frost-bite, or, again, the dead tissues may undergo a peculiar "parchment" metamorphosis, and form dry and very hard plates.

The case reported by Dr. Nedopil is that of a female aged 19, who was first seen by Dr. Billroth in September of last year. In the summer of the previous year, the patient had noticed for the first time that the fingers became dead and pale after washing in cold water. In August, the tip of the index finger of the right hand, after an attack of local asphyxia, became very painful, remained hard for a time, and finally mummified. A line of diminution was formed after much inflammation, and



subsequently the last phalanx became necrosed, and was removed. Just as the inflammatory process had ceased in the index finger, the middle finger of the same hand was attacked with inflammation, resembling that of paronychia, which did not extend beyond the radial half of the bed of the nail, and terminated in the exfoliation of some small dry and parchment-like crusts. The patient, whose disposition had previously been lively, now became melancholic. A year later, the index and middle fingers of the left hand were similarly affected, and in like order, when the patient was first seen by Dr. Billroth, all the fingers of each hand were cold and pale.

There can be no doubt, Dr. Nedopil states, that the cause of such attacks of local asphyxia is spasm of the walls of the arterioles in the parts affected. Raynaud made out by ophthalmoscopic examination spasm of the retinal vessels in the subjects of local asphyxia and ischæmia. Through irritation of sensory and centripetal nerves, the reflex centre of the vaso-constrictors which control the circulation at the extremities of the limbs, is excited. This spasm, when prolonged and carried to the extent of producing complete occlusion of the small arterial vessels, will give rise to the above described pathological results.

**VÖLKER ON STENOSIS AFTER TRACHEOTOMY.**—In a contribution to the *Deutsche Zeitschrift für Chirurgie*, Band ix, Hefte 5 and 6, Dr. Völker of Brunswick discusses the causation and pathology of stenosis of the larynx or trachea after operation. Dr. W. Koch was one of the first to direct attention to the serious results that occasionally follow the removal of the cannula from the air-tube of a child who has undergone tracheotomy for the treatment of croup or diphtheria. Immediately after the removal of the tube, or, in some much less frequent cases, after closing and cicatrisation of the wound, the patient suffers from dyspnœa, which increases rapidly in intensity, and necessitates a speedy reinsertion of the instrument. The attack of dyspnœa is repeated whenever the cannula is removed, so that the patient is compelled to bear this during the rest of life. This condition of dyspnœa, after removal of the cannula, is attributed by Koch to obstruction of the air-tube through outgrowths of granulation-tissue from the tracheal mucous membrane. According to the more recent investigations of Pauli, this stenosis from overgrowth of granulations is the result of prolonged retention of the cannula. The mass of swollen granulations springs from the margin of the superior portion of the wound, and just at that part where no pressure is excited by a curved cannula of the usual form. This statement as to the starting point of the obstructing fold of granulation is confirmed by an observation that was made by Dr. Völker in 1876. In a *post mortem* examination of a child who, three months before death, had been tracheotomised for croup, and had been subsequently compelled to retain the cannula, in consequence of obstruction in the air passage above the fistula, Dr. Völker found that the trachea just above the fistula was closed by a mass of granulations, which seemed to be directly continuous with the upper half of the margin of the orifice in the air-tube. The posterior margin of the mass of granulations was in contact with the posterior wall of the trachea, but the handle of a scalpel could be readily passed between them. This mass then formed a kind of valve, fixed anteriorly and laterally to the wall of the

trachea, just above the wound, and free behind, where it presented a sharp and indented margin. Such a condition as this, on removal of the cannula and closing of the wound during life, would have rendered inspiration very difficult and expiration impossible. Dr. Völker holds that the use of the ordinary curved cannula favours the formation of this valve of granulation-tissue, because such instrument leaves quite free from any pressure the upper and inner angle of the wound made in the operation of tracheotomy. At this part, the granulations expand without any resistance, and as they grow and extend inwards, they are supported by the convexity of the cannula. In order to prevent this overgrowth of granulation tissue, care should be taken to remove the cannula, when this is of the usual form, as soon as possible after the operation, or an attempt be made to procure an instrument which will press equally on all parts of the periphery of the wound. The valve, when formed, should be removed through excision, tension, or cauterisation.

Dr. Völker points out that granulation-masses may arise from other causes, and spring from other parts of the laryngeal or brachial mucous membrane than that bordering the upper part of a wound or fistula. A growth of this kind is occasionally developed when the extremity of the cannula touches the posterior wall of the air-tube. Here, after prolonged contact of the hard instrument with the mucous membrane, an ulcer is formed, from which a mass of granulations may grow, passing either directly downwards or upwards between the convexity of the cannula and the posterior wall of the trachea. Should such a mass, growing in the latter direction, chance to meet with a similar mass springing from the margin of the wound, on the anterior wall of the air-tube, a complete diaphragm might be formed.

W. JOHNSON SMITH.

**TIFFANY ON THE FLEXION TREATMENT OF ANEURISM.**—In a new American series, the *North Carolina Medical Journal*, June 1878, Dr. Tiffany, Professor of Operative Surgery in the University of Maryland, relates two cases of popliteal aneurism treated by flexion, which present some points of interest. The first was that of a man aged 35, who had had instrumental compression applied for over four months when Dr. Tiffany first saw him, iodide of potassium and iodide of iron being also administered, apparently with some idea that the disease might be due to syphilis, though the history of accident was clear, and the connection of the aneurism with an old attack of syphilis quite conjectural. The treatment had succeeded in diminishing the size of the tumour, and the sac seemed partly filled with coagulum. Flexion of the knee had been combined with the use of the tourniquet for a few days before the patient was seen by Dr. Tiffany. Under these circumstances, "firm" flexion, continued for thirty hours, completed the cure.

[A very appropriate case for the use of flexion, which in all probability, as Dr. Tiffany suggests, acted by displacing some of the clots, which thus found a nucleus for extended coagulation. One can hardly help inquiring why such painful treatment as instrumental pressure, with a couple of tourniquets, should have been persevered in so long.—*Rep.*]

In the second case, the patient was dying from pulmonary disease when the aneurism was first noticed. The aneurism was believed to have been ruptured when seen, though the recorded symptoms do not prove that it was so. Flexion was employed

for fifteen hours; the pulsation disappeared, and the tumour diminished in size during the three days which he survived. After death, two distinct aneurisms were found, the upper one being filled with firm, partially discoloured clots, the lower one ruptured on its lower and outer aspect by a rent about an inch long. The artery between the two aneurisms was filled by clot for an inch and a half. The sac of the second aneurism was also filled with moderately firm clot. Outside of the second aneurism was "a false aneurism" of the size of an orange, which was also filled with clot. The whole arterial system, including the popliteal artery and the aneurismal sac, were "stiff from atheroma".

[In this case also we may allow that the efficacy of the flexion treatment is apparent, though we should much doubt the prudence of adopting forced flexion in any case where there was good reason for believing that the arterial system generally was atheromatous, and still more so in any case where the aneurism was believed to have given way. I have seen one undoubted case of rupture of aneurism during forced flexion, and I cannot think the treatment one which can ever be indicated in a case of ruptured aneurism. It is true, that as this patient was moribund, the ordinary treatment could not be carried out. The only question is, whether any treatment at all should have been adopted. Still, as an instance of what flexion may effect, the case is an interesting one.—*Rep.*]

T. HOLMES.

**TAYLOR AND OTHERS ON THE TREATMENT OF HIP-JOINT DISEASE.**—An interesting question has lately been raised by Dr. Charles Taylor in the New York Medical Journal Association (*New York Medical Journal*, April), as to the propriety of excising the hip-joint so frequently as is the practice at the present day. The results of this operation, as far as can be gathered, do not, Dr. Taylor submits, compare favourably with other modes of treatment of the suppurative stage. He thinks, further, that if cases that have been operated on by excision were followed up for a longer period than is usually the case, the results would be shown to be still less favourable.

Bearing upon this subject, a list of eighty cases of hip-joint disease, treated in the third stage, was read by Dr. V. P. Gibney. These were specially instructive, as showing the results of treatment in hospital as indoor or out-patients, without the weight or extension apparatus, and without excision. "The term 'cure' was used in the sense of arrest of the disease, with or without deformity, and return of the limb to usefulness; and when all sinuses had closed, and all tenderness and pain had disappeared, and a gradual increase of power and facility of locomotion had returned." These cases were under observation for periods ranging from two months to five years after cure, and no signs of relapse occurred in any.

In regard to the age at which cure was established, it was found that the majority were between the eleventh and fourteenth year. The duration of the disease ranged from six months to fifteen years, the largest number of cases lasting three years.

In respect to deformity: the angle of greatest extension of the thigh on the pelvis was  $135^\circ$  in nineteen cases, and  $145^\circ$  in nineteen more. In eighteen, the angle was  $150^\circ$ , and in eleven,  $160^\circ$ . The angle of greatest deformity was  $90^\circ$  in two cases,  $110^\circ$  in three, and  $120^\circ$  in three.

As to motion, thirteen had some at the hip-joint,

the remainder were ankylosed. Forty-eight cases suppurred, the remainder did not. The average shortening was an inch and three quarters, the maximum four inches. In seven cases only were crutches required, or the patients walked with the hand on the knee. Twelve cases required a cane or crutch for long distances.

[These are interesting statistics, so far as they go, showing that a large number of cases of hip-joint disease may recover, so to speak, spontaneously, and they ought perhaps to encourage us to more patience where we are inclined to excise. But they prove nothing conclusively, unless it is known what proportion these cures bear to the total number of cases of hip-joint disease occurring in the population of the whole area from which they were drawn. Given the population of this area, the total number of cases of hip-joint disease occurring in it in a given period, the number treated on the expectant plan and the number treated by excision, the deaths under both systems and the results of both, we might draw some definite conclusions; but, in the absence of these data, such are impossible. The question raised is a suggestive one, however.—*Rep.*]

**SATTERTHWAITE ON THE TREATMENT OF IMPACTED FRACTURE OF THE LOWER END OF THE RADIUS.**—Dr. Satterthwaite (*New York Medical Journal*, April) advocates a departure from the treatment usually adopted in this country for some of the above fractures, and alleges that his practice has been "eminently satisfactory". Instead, namely, of allowing impacted fractures to remain so until they become consolidated, he does his best to unlock the lower fragment from the shaft by force, and then re-adjusts the fractured surfaces. This he does in the first place by pulling steadily and strongly on the hand (the arm being firmly held by an assistant), and then exercising firm lateral pressure on the lower fragment with the fingers, until a distinct mass is felt as the pieces become disengaged. He then puts up the member in an appliance which does not essentially differ from Nélaton's apparatus, except that the back splint is not pistol-shaped. In support of this method of breaking up impacted fractures, he quotes the opinion of Dr. Van Buren, who also advocates it. Ether is to be used if there be much difficulty. Dr. Satterthwaite's experience extends to twenty-nine cases, which can hardly be regarded, however, as enough for any positive conclusion.

ARTHUR E. BARKER.)

**CALLENDER ON DISLOCATIONS OF THE MUSCLES, AND THEIR TREATMENT.**—Mr. Geo. W. Callender (*British Medical Journal*, July 1878, p. 51) discusses this class of injuries, which are far from being rare, and yet are seldom alluded to in surgical works. Slight as are many of these hurts, in a surgical point of view, still they so seriously interfere with the comfort of the patient, and are attended with so much chronic pain, as to make their diagnosis and treatment a point of great interest to all. The tendons most frequently affected are that of the biceps and the ligamentum patellæ. Dislocation of the biceps tendon, when the sheaths that bind it in its groove are torn, is frequently beyond treatment, as far as regards cure. The leaders of the wrist are often great sufferers, and it is only within the few weeks following the occurrence of the accident, that the repair of the surrounding tendinous injuries has a chance of being perfected by prompt reduction and rest.



A most troublesome case of dislocation of the two peronei from behind the external malleolus fell under Mr. Callender's care. It had occurred two years previously, and could only be relieved by instrumental aid. Rupture of the muscular sheath, causing protrusion of the exposed muscle, is not at all an uncommon accident, and is very difficult to cure radically.

Dislocations of the muscles themselves are also not rarely met with, causing great misery until reduced, attended as they are by tearing of surrounding parts, straining of nerve-fibres, rupture of small vessels, and pain in every effort of the displaced muscle. A man carrying a heavy box down stairs, slipped in his endeavours to recover his footing, twisted himself, and, at once, felt a severe pain in the lower dorsal region of the spine, by the side of the spinous processes; over the painful spot a slight swelling could be felt. By placing the patient in the position that caused least pain, the muscle was relaxed, and then, pressure with the hand armed with a pad of lint, and the patient moving so as to bring the displaced muscle into play, quickly caused reduction. Rest for a time apparently cured him, but he was afterwards subject to returns of the displacement, which he learnt to reduce himself. Another case of dislocation of the pronator radii teres, whilst playing lawn tennis, fell under Mr. Callender's notice, and led him to study the subject of muscular dislocation, which had been previously discussed by M. Ponreau, who relates an interesting instance where a young girl dislocated one or more of the digitations of the splenius. If, then, we meet with a case in which sudden and unusual movements of the body have been followed by pain—local in its character—made worse by certain movements, or preventing certain movements, and especially if such pain be referred to the site of muscular digitations about the spine, etc., it is wise to adopt measures to reduce muscular dislocations, by relaxing the muscle or part of muscle displaced, and by rubbing, kneading, or pressing, while attempting to reduce it; if this fails, make pressure over the part while the muscle is brought into play. As we need guidance from the patient, these manipulations, often painful, had better be done without the aid of anæsthetics.

[Sir James Paget (*British Medical Journal*, Jan. 5, 1877) made some interesting remarks on the shifting of tendons in the course of a lecture upon cases that bone-setters cure; and a paper by M. Jarjavat in the *Gazette Hebdomadaire*, 1867, Nos. 21, 23, 25, entered fully upon the subject of the dislocation of tendons. While engaged upon this article, the reporter was called to a case of dislocation of one of the digitations of the splenius, which was readily reduced by following Mr. Callender's directions, greatly to the surprise and pleasure of patient and friends.—*Rep.*]

**ADAMS ON DUPUYTREN'S CONTRACTION OF THE FINGERS.**—Mr. William Adams contributes to the *British Medical Journal*, June 1878, p. 928, a paper upon this disease, illustrated with plates of the dissected parts. Mr. Adams has never met with a case in the female, and generally has found it to attack men in the middle, or beyond the middle, period of life.

The pathology and treatment of this form of finger contraction is still the subject of much difference of opinion, and Dupuytren appears to have been the first to investigate its anatomical condition by dissection. He found, the skin being removed

from the whole extent of the palm of the hand, and the palmar fascia of the fingers, that the fold, or the puckering of this structure, entirely disappeared. The palmar aponeurosis was found retracted and diminished in length, its inferior part being divided into cords, which passed on to the sides of the affected fingers. On extending the finger, he observed that the aponeurosis underwent a kind of tension of crispation—this was a ray of light; so he considered the aponeurosis to be the cause of the disease. He cut the prolongations on the sides of the fingers, and immediately the contractions ceased, and the fingers were readily completely extended, the tendons being natural; the sheaths were not opened; the articulations, ligaments, and bones were in their natural state.

In one case of the affection that fell under Mr. Adams's care, a gentleman, suffering from Dupuytren's contraction of the fourth and fifth fingers of the right hand, while trying to hold a restive horse, had them torn open and the skin of the palm torn across, together with the palmar fascia; the sheaths of the tendons were not injured. The hand was bandaged with the fingers extended, and quickly healed, with the flexion power of the fingers perfect. Mr. Adams thinks that the affection depends nearly always upon a constitutional rather than a local cause, and essentially upon a gouty diathesis.

By means of a very small tenotomy-knife, Mr. Adams makes multiple subcutaneous divisions of the palmar fascia, cutting downwards very slowly and cautiously, taking care not to dip the point of the scalpel, or to divide any structures except the contracted band of fascia. In many cases, four punctures are sufficient for two fingers; if there be more than two to operate upon, it is better to confine the operation to two fingers. The fingers are immediately extended and retained by splints. The operation is readily performed under ether-spray, if the frozen skin be rapidly thawed by friction with the operator's warm hand, so as to leave the deeper parts insensible to pain.

[While on the subject of Dupuytren's disease, the reporter would draw the attention of the reader to Mr. Jonathan Hutchinson's paper in the *British Medical Journal*, June 1876, p. 747, upon Glaucoma as a Neurosis, and the analogy between this affection and the contraction of the palmar fascia.—*Rep.*]

**GAY ON VARICOSE ULCER AND ITS TREATMENT.**—Mr. John Gay, in another of his instructive papers, explains, in the *Lancet*, June 1878, p. 928, that the essential factors, in respect of a varicose ulcer, are extreme degeneration of the vein, and resultant incompetency of its valve—always a barrier-valve, that is, a valve that intercepts all regurgitation of blood, or any attempt to force the finest injection from above, through one such barrier, to a segment below, which barrier-valves are placed in certain situations on the venous circulation of the leg. One is met with a short distance below the knee-joint; a second a short distance above the ankle-joint; a third immediately below that joint. A varicose ulcer is always met with in close contiguity to one of these barriers, especially those above and below the ankle-joint, and is closely associated with incompetency in a saphenous tributary—not the saphena itself.

**SMITH ON SEVERE INJURY OF THE AXILLA DURING REDUCTION OF A DISLOCATED HUMERUS.**—Mr. Thomas Smith in the *Lancet*, July 1878, p. 3, reports a case where, with the heel in the axilla and

from a force not greater than that usually employed, the axilla tore as though it had been wet paper, the foot apparently cutting its way through the tissues and not tearing them by excessive stretching. The patient was a cellarman, aged 58, who had eight weeks previously fallen on his elbow and received a subglenoid dislocation of the humerus; which, however, was not detected at the time. He died nine days afterwards from exhaustion. The pectoral muscles were almost completely torn across, the vessels and nerves uninjured.

On *post mortem* examination, diffuse supuration was found to exist in and around the axilla, and the parts about the upper and middle lobes of the right lung were in a state of consolidation. The heart was flabby; the liver large, pallid, and fatty; the kidneys normal; the spleen large, soft, and semi-fluid; vessels of the size of the tibials were rigid from calcareous degeneration. The muscles generally were paler, softer, and more flabby than normal. At the seat of injury, nothing could be ascertained as to their condition as regards degeneracy, owing to the amount of sloughing that had taken place. No microscopical examination was made.

[This case is one of very great rarity, if not unique. Several instances are recorded in which injuries of the axillary vessels and nerves have occurred in the reduction of old dislocations of the humerus, and are referred to by Mr. Erichsen in the *Science and Art of Surgery*; but cases of such extreme friability of the parts as is described by Mr. Smith, are apparently unknown, or almost so, in surgical literature.]

**LEDIARD ON A DISTENDED BLADDER SIMULATING OVARIAN TUMOUR.**—Dr. Lediard, in the *Lancet*, p. 935, adds another to those deceptive cases where a vesical tumour simulated ovarian disease. The bladder had quite lost its power to contract on account of its long continued overdistension.

[In the *Lancet*, vol. ii, 1875, p. 539, a somewhat similar case is reported by Dr. Jaccoud. Here the catheter failed to empty the bladder on account of atony of its muscular coats. Great dilatation of the bladder and ureters was found at the *post mortem* examination.—*Rep.*] RICHARD NEALE, M.D.

**VOLKMANN ON CANCER OF THE RECTUM.**—Dr. Volkmann has published in his *Klinischer Vortrage*, No. 131, an article on the methods of operating in cancer of the rectum. (It is abstracted by Dr. J. C. Warren in the *Boston Medical and Surgical Journal*.) He describes three conditions, requiring different modes of operation. In the first there is a circumscribed tumour, in which case a small portion of the wall of the rectum is removed, the wound being closed by sutures. In the second class of cases the anus and a greater or less portion of the bowel are affected, necessitating an extirpation of the rectum, so called, the upper end of the gut being dragged down and stitched to the skin. Lastly, there is the same condition as in the previous case without implication of the anus. A circular portion of the rectum is removed, and the upper and lower edges of the bowel are brought together by stitches. In the first variety, which may or may not involve a portion of the anus, the wound must be made in such a way as not to cause stricture. The edges are carefully brought together with catgut sutures, and a fine drainage-tube is laid beneath them, the end of which protrudes at the anus. If the disease be wholly inside, we must first thoroughly dilate the sphincter

and keep it open with spatulae. The disease is then dragged down with hooks, and removed as if it were an external growth. The wound is stitched as before, but in order to have the tube discharge externally it is inserted through a fistular opening made by a narrow lancet at the outer border of the sphincter, extending up to the lower edge of the wound. There is no danger of stricture, even if the wound be vertical, owing to the capacious size of the rectum at this point. Sometimes dilatation does not suffice, and it is then necessary to cut through the sphincter down to the coccyx. This wound is afterwards carefully sewed up, but if the disease is on the posterior wall the tube can be laid in the wound beforehand.

When the whole anus and a part of the rectum is diseased the operation of the extirpation of rectum is performed, the sphincter and canal being removed as a hollow tube. To get room, incision may be made above into the perinaeum and below down to the sacrum. Volkmann has even resected portions of the bone as high up as the promontory, and in women a portion of the posterior wall of the vagina. Of course the peritoneum is laid open in these operations, but the hole is immediately plugged with carbolised sponges until the operation is finished, and is then carefully sewed up. The healthy end of the bowel is stitched to the skin, and then small drains are inserted, or in the more extensive operations a long non-fenestrated piece of tube is also inserted, reaching from without to some point in the depth of the wound, and is put in communication with a drip. The bed is protected by a rubber pan placed under the hips, and at the end of four or five days the drip is omitted.

In the third variety a circular piece of the rectum must be excised, the disease being altogether inside and involving the whole circumference. A preparatory incision is made upwards through the perinaeum and downwards to the sacrum, as far up as the lower edge of the disease, which is thus more easily removed. The mucous membrane above is then brought down to the lower edge of the wound thus made and stitched to it, and the vertical cuts are sewed up. One of these vertical cuts may serve as a bed for the drip tube.

A plug of cotton inside of oil-silk is usually inserted into the bowel after the operation, and a T-bandage applied. Although these operations can be looked upon as only palliative, Volkmann urges them strongly on account of the immediate relief from pain which they afford. Moreover, cancer of this part is not by any means of the most malignant type. In three cases he has effected a permanent cure. In other cases there was no return for six, five, and three years respectively. A patient died of cancer of the liver eight years after the operation, without local return. Another patient is now about in active business, eleven years after the first operation, two operations having been subsequently performed. In very severe cases, such as he now declines to operate upon, he suggests as the operation of the future laparotomy, with extirpation of the rectum as high up as the sigmoid flexure, the end of the bowel being stitched into the wound. At present, for such cases he would advise lumbar colotomy, but would limit that operation to this class alone, and not advise it for so large a class as is done in England.

**CHENERY ON FRACTURE OF A RIB BY COUGH.**—At a meeting of the Suffolk District Medical Society (*Boston Medical and Surgical Journal*, May 23), Dr. Chenery stated that he was summoned to a woman who, in a fit of coughing, felt something give



way in her side, attended by a sharp report and a severe pain. She was aged 23, was confined nine months after marriage, had scarlet fever one week afterwards, and lost her child by that disease, and after nineteen months of married life, she was about to be confined again. For two or three weeks she had had a spasmodic cough, like whooping-cough, but she had had whooping-cough when a child. The conclusion, therefore, was that the cough arose from bronchitis, borrowing something of its nervous complication from her state. On the morning of the accident she was not coughing very hard. She had just had a paroxysm, which was followed by an unusual spasm of the right side, at which time the rib gave way. Being the lower fixed rib, the cartilage was carried forward and held by the gravid uterus, thus favouring the action of the muscles. A broad strip of adhesive plaster was applied three inches to the left of the spine, and carried well round upon the cartilages, and terminated there, while hypodermic injections of morphia were employed as near to the seat of injury as possible, in order to ease the pain and check the cough. She was confined seven days later, and did well.

Dr. Chenery said that it was not common to meet with fracture of the ribs, except from external force. The only other case occurring in his own practice which was not due to direct outward violence, was in an aged but active farmer. He was a tall man, and in exerting himself to pull up a juniper root, it gave way, causing him to sit suddenly down upon a rock which was behind him. The costal muscles were doubtless in a tense condition at the time, and three ribs were broken. Although ribs do sometimes give way in the aged by the force of severe cough, it is unusual to meet with such an accident in young people; therefore Dr. Chenery thought that the cause was to be found in an altered condition of the ribs themselves, due to the pregnant state. When married, nineteen months before, this woman had a beautiful set of teeth, with no decay. A few months after conception, she began to experience trouble with her teeth. They ached, were tender, began to decay, and to crumble away easily, so that she was obliged to have some removed. On her second conception, decay of the teeth took a new start, several others were extracted, and all were in such a state that the only alternative was their entire removal and replacement by an artificial set.

**MCSherry ON THE TREATMENT OF LARYNGEAL STENOSIS.**—Dr. H. C. McSherry (*Maryland Medical Journal*, January 1878) has followed Schrotter's plan of dilatation of the larynx by the introduction of hollow bougies in the larynx, and has succeeded in so far overcoming the contraction as to enable his patient to resume his work. The patient had formerly had syphilis, which had so far thickened the larynx as to prevent sufficient air from entering the lungs. The man was cyanotic, but laryngotomy was not necessitated by his condition.

**GENZMER ON THE TREATMENT OF HYDROCELE BY INCISION PERFORMED ANTISEPTICALLY.**—Dr. Genzmer (Volkmann's *Klinischer Vorträge*, No. 135) gives a list of sixty-nine cases treated in this way without a single fatal result, and with no excessive inflammation. The average duration of the stay of patients in the hospital was ten days. There was in but one or two cases an elevation of temperature of more than three degrees. The method is to open the sac by an incision from three to four inches in length,

The testicle is then examined, and if there be cheesy orchitis the diseased portions are laid open and scraped out. The edges of the tunica are then stitched to the scrotum with catgut sutures. The testicle now appears lying at the bottom of a gaping wound. A drainage-tube is placed vertically upon the organ, and the edges of the wound are partly approximated by one or two deep silk sutures to prevent the testicle from escaping from the sac. Primary union of the walls of the sac takes place, and a slight granulating surface is left at the end of a few days to mark the site of the cut. The tube is removed usually about the fourth day, when the silk sutures are also taken out, and the dressing changed a second time at the end of a week. The wound is then dressed with benzoated cotton-batting inside of a suspension bandage, and the patient discharged.

**PILCHER ON INJURIES OF THE WRIST-JOINT.**—Dr. L. S. Pilcher (*Proceedings of the Medical Society of the County of Kings*, March 1878) presents some interesting results of his experiments and clinical experience on certain injuries of the wrist-joint, as follows. Motion, massage, support, and compression, are of chief importance in the treatment of sprains of the wrist-joint. Immobilisation, prolonged beyond the period of afflux, increases the danger of inflammatory complications, and prolongs the period of repair.

Severe sprain of the wrist is liable to be complicated by a transverse fissure of the radius near its lower extremity. This injury cannot be positively demonstrated in any given case, and does not call for special treatment. Transverse fracture of the radius within one inch of its lower extremity is the result of a force of avulsion communicated to it through the medium of the anterior ligament of the wrist-joint, as the consequence of extreme bending backward of the hand and wrist. Displacement of the fragments is the result of a downward and forward impetus impressed upon the upper fragment of the radius still in action after the avulsive force has been expended.

By this displacement, the posterior aponeuro-periosteal envelope of the radius is not torn across, but is stripped up from the back of the upper fragment for a variable distance, retaining its attachments to the lower fragment also. The state of flexion, into which the hand is thrown upon its recovery from the position of extreme extension, renders this dorsal strip tense, and causes the lower fragment to become entangled by the projecting rough posterior of the upper fragment. The strength and tension of this dorsal pseudo-ligament may be such as to resist powerful extension in the line of the long axis of the radius, and to occasion great difficulty in the reduction of the fracture. It is the chief agent in the production of permanent bony deformity as a sequel to this injury. The movement of rotation backwards around the head of the ulna, performed by the lower fragment and the attached carpus and hand simultaneously with the displacements of the radial fragments, is due chiefly to the oblique direction and point of ulnar attachment of the strong inner fasciculus of the anterior ligament of the wrist. Reduction of the fracture, even in cases of extreme displacement is easily effected by bending the hand and wrist sufficiently far back to relax the dorsal pseudo-ligament, slight extension and manipulation will then suffice to restore the fragments to their proper relations. The fracture is both preceded and followed by a severe sprain.

The sum of the injuries inflicted presents a sprain of the most aggravated description. The fracture never entails permanent disability. The sprain is the fruitful source of long-continued, sometimes permanent, impairment of the function of the joint.

The sprain is first, both in order of time and importance, in its demands upon the attention of the surgeon. After the reduction of the fracture every support necessary for its satisfactory retention is afforded by the structures which surround it, with the simple addition of an adhesive strap, snugly encircling the wrist so as to firmly grasp the injured structures. No splint of any kind is useful in the treatment of this fracture.

Dislocation of the ulna does not alter the indications for treatment, nor demand any material modification of the methods to be used.

#### RECENT PAPERS.

- Syphilis in a New-born Infant. By M. Carle. (*Lyon Médical*, July 21.)  
 Treatment of Hereditary Syphilis. By M. Letulle. (*Gazette Médicale de Paris*, July 20.)  
 Examples of Fractures Complicated with Wounds, communicating with Large Articulations, Treated by M. Alphonse Guérin's Cotton-Wool Dressing. By M. P. Berger. (*La France Médicale*, July 20.)  
 Fracture of the Tibia: Want of Consolidation: Injections of Tincture of Iodine into the Seat of the Fracture: Rapid Consolidation. By M. L. Carrie. (*Ibid.*)  
 Contribution to the Clinical History of Tumours of the Testicle. By Dr. G. Poinot. (*Le Progrès Médical*, July 20.)  
 Considerations on Tetanus and its Treatment. By Dr. Aribaud. (*Lyon Médical*, July 21.)  
 Extraction of a Piece of Iron from the Bladder by the Natural Passage. By Dr. Delafosse. (*L'Union Médicale*, July 18.)  
 Modifications Introduced into the Operation of Strabotomy by Drawing Back the Tendon. By M. Grandelement. (*Lyon Médical*, July 7.)

#### DISEASES OF CHILDREN.

ARCHAMBAULT ON HYDATID CYST OF THE LIVER IN A CHILD.—*L'Union Médicale* for July 20th contains an account of a child three and a half years of age, who was admitted into the Sick Children's Hospital, under M. Archambault, February 5th. It had for a year suffered from a large belly; this enlargement had been gradual, and was not accompanied by diarrhoea, vomiting, or jaundice. There was no dog in the house where the patient lived. On examining the abdomen, a projection was at once noticed on its right side: palpation revealed the existence of a tumour springing from the liver, and the edge of this organ could be plainly felt to be sharp, raised, and prominent in front. It was easy to recognise that the increase in the volume of the liver was not due to hypertrophy of the organ, but to the presence of a true tumour, round, smooth, and painless, equal in volume to the head of a fetus, appearing to originate in the right lobe of the liver; there was no discoloration of the skin covering the growth. The tumour was hard, but neither fluctuation nor fremitus could be made out, but at its most projecting part a semi-elastic feel suggested the idea of a liquid collection. The child was healthy and plump, without any trace of scrofula or of osseous suppuration; there was no digestive disturbance, no œdema of the limbs, no ascites.

On February 8th, chloroform having been administered, M. Archambault punctured the swelling with an aspirating needle, and withdrew 450 grammes (nearly a pint) of a fluid as clear as rock-water. An examination showed this to be non-albuminous, and the microscope did not reveal any hooks. The child

progressed favourably until the 11th, when the temperature rose, and slight pain was complained of near the umbilicus, but the belly was not very sensitive to the touch; the liver still remained large, but no tumour could be felt. The symptoms improved until the 20th of the month, when diphtheria made its appearance, accompanied by albuminuria, and suppuration in the right submaxillary region. On March 10th the mother removed the child from the hospital; at that time it was pale, and very feeble, but the albumen had disappeared. The hepatic tumour had not been reproduced. Five days afterwards death took place, this being preceded by an attack of diphtheritic paralysis. M. Petel, who reports the case, states that the age of the patient is an object of especial interest, as many writers upon diseases of children do not mention this malady. West, D'Espine, and Picot are exceptions: the last two having published some cases of hepatic cysts in children four years of age. Below this age the affection is not mentioned, except the case quoted by Cruveilhier as occurring in an infant twelve days old, where the hydatid cyst opened into the intestine. It is generally about eight that the disease occurs most frequently. The youngest patient observed by Frerichs was seven. Besides the age, there are three other noteworthy circumstances: 1. The absence of hydatid fremitus; 2. The absence of hooks, so that the parasitic nature of the affection was only made possible by the volume of the cyst; 3. The cure by a single puncture. These circumstances can be explained by the absence of secondary vesicles, or at least their presence in a very small degree, for it is known from the experience of Dr. Sadde that the fremitus denotes the presence of a certain number of daughter cysts. If the fremitus be absent, one ought to find few or no hooks.

T. F. CHAVASSE, M.D.

LUDEWIG ON A CASE OF INTUSSUSCEPTION IN AN INFANT: RECOVERY.—In a communication to the *Berliner Klinische Wochenschrift* for July 1st, M. Ludewig of Heidelberg observes that cases of intestinal obstruction may be divided, with reference to the treatment, into two classes: 1. Those requiring direct operative interference; 2. Those in which an expectant treatment of the symptoms only is indicated.

The first group comprises those cases where the obstruction is situated at or below the ileo-cæcal valve, while those occurring above this situation cannot as yet be treated by mechanical means. These mechanical means consist of the introduction of the sound, fingers, or hand, and of the injection of either air or water; and they are only applicable so long as there is only moderate swelling of the invaginated portion of intestine, and before any serious adhesions have formed. Should either or both of these conditions exist, then either an operation (laparotomy) is indicated, or a merely expectant course is to be pursued. Laparotomy, or the opening of the abdomen, cannot well be performed in infants whose powers of resistance are but very slender; hence an energetic employment of the mechanical means becomes imperative, and it is only when these all fail, that as a last resource laparotomy may be resorted to. Fortunately, iliac invagination is of extremely rare occurrence in infants.

The patient in the present case was a healthy well-nourished female infant, eight months old. On the 12th December last she was suddenly, and with-



out any apparent cause, seized with violent vomiting of greenish yellow matter, while a scanty stool passed some little time afterwards was streaked with blood. Vomiting of all ingesta continued till the 15th, when a digital examination *per rectum* detected the existence in the upper part of the rectum of a soft rounded swelling, obstructing the entire gut, and having a small slit-like fissure at its posterior part, which was neither more nor less than the invaginated portion of the gut. Reposition was effected by means of the finger without difficulty, with the immediate result that the child was able to take and retain a considerable quantity of milk. On the same evening, vomiting again set in; and the rectal tumour was found to have returned, and was again reduced. This was repeated four times in the course of the next three days. On the 18th the invaginated gut presented a dark-coloured protuberance as large as a walnut, external to the anus, by the side of which a bougie could be passed about three inches up the bowel. The reduction could now no longer be effected with the finger, and it became necessary to inject about half a pint of water through the transverse fissure by means of an elastic tube. The tumour was then again returned; vomiting ceased, and a yellowish motion was passed. But notwithstanding the repeated injection of water and the administration of small doses of opium, the bowel continually descended. A tube was therefore introduced and fixed by means of bandages and left in the bowel for six days, but even then on removing the tube the tumour again came down, and the tube had to be replaced for fourteen days more. After that, the cure seemed to be complete. During the whole progress of the case the temperature remained normal, never exceeding 38° Cent. (100.4° F.), and the child's appetite continued good. The seat of the invagination appears to have been the descending colon, and it came down and was replaced twenty-two times in the course of a single month. The case establishes the value of water injections, and also of leaving the injection-tube in the bowel for a considerable time after passing it beyond the seat of the obstruction.

W. J. TREUTLER, M.B.

#### RECENT PAPERS.

- Convulsions. By M. Archambault. (*Le Progrès Médical*, July 20.)  
 General Considerations on the Treatment of Infantile Diseases. By Dr. Heilly. (*Bulletin Général de Thérapie*, July 15.)  
 A Case of Lumbar Spina Bifida cured by the Elastic Ligature. By Dr. Cavagnio. (*Annali Universali di Medicina e Chirurgia*, July.)  
 Treatment of Chorea. By M. Bouchut. (*Gazette des Hôpitaux*, July 16.)

### MATERIA MEDICA AND THERAPEUTICS.

MOLESCHOTT ON THE THERAPEUTIC ACTION OF IODOFORM. — Dr. Moleschott (*Wiener Medicin. Wochenschrift*, Nos. 24, 25, and 26, 1878) states that he has used iodoform with good result in the treatment of exudation into the pleura, pericardium, and peritoneum, and of the acute hydrocephalus of children. He generally applied it in the form of ointment (1 in 15 of lard) or with elastic collodion (1 in 15 of collodion). Large glandular swellings were caused to disappear under the use of the iodised collodion. It was found useful as a means of as-

suaging pain in gout, neuralgia, and neuritis. Syphilitic myocarditis was cured by iodoform inunction, combined with the internal use of the drug in doses of from three-fourths of a grain to a grain and a half daily. Iodoform appears to act like digitalis on the heart, increasing the strength and reducing the frequency of its beats; and was hence used successfully in uncompensated valve-disease. Its action depends probably on its ready decomposition, by which the iodine in a nascent state is brought into action on the tissues.

DEMME ON THE ACTION OF MURIATE OF PILOCARPIN IN CHILDREN. — Dr. Demme of Bern (*Centralzeitung für Kinderheilkunde*) has administered muriate of pilocarpin by subcutaneous injection to 33 children. Of these, 18 suffered from desquamatory nephritis with dropsy after scarlatina; 3 from nephritis after diphtheria (without scarlatina) and a high degree of dropsy. In 12 cases, the diseases were dropsy from disease of the valves of the heart, multiarticular rheumatism, whooping-cough, bronchopneumonia, and parotitis. The ages of the children varied from 9 months to 12 years. The dose administered subcutaneously was—up to the end of the second year, 5 milligrammes (.075 grain); from the second to the sixth year, 7.5 milligrammes to 1 centigramme (0.11 to 0.15 grain); and from the seventh to the twelfth year, 1 centigramme to a quarter of a gramme.

The injections were well borne, except in two cases; in one of these, vomiting, hiccup, pallor of the face, and syncope; in the other, yawning, hiccup, and twitchings of the limbs, appeared from three to five minutes after the injection. The proper action of the pilocarpin was imperfect in both these cases.

Pilocarpin was found to be an excellent diaphoretic and sialogogue. The latter action was more marked in very young children, the former in older ones. The action usually commenced from three to seven minutes after the administration, increased up to 15 minutes, remained at its height up to 20 or 40—and, in rare cases—75 minutes, and then gradually ceased. There was an inconsiderable fall of temperature. The frequency of the pulse was increased by 20 to 60 beats; the pulse-wave was fuller. The amount of urine was only exceptionally increased; in two cases, there were watery stools. Dr. Demme arrives at the following conclusions.

1. Pilocarpin is an effective diaphoretic and sialogogue in childhood.
2. It is borne very well, in appropriate doses, even by children of very tender years.
3. Unfavourable after-symptoms are but rarely observed, and, probably, may be altogether prevented by the administration of small doses of brandy before the injection.
4. The conditions in which it is chiefly indicated are the parenchymatous inflammations of the kidney with dropsy, following scarlatina.
5. Pilocarpin does not appear to exercise an influence on the heart's action.

LOESCH AND FRÄNKEL ON THE ACTION OF PILOCARPIN. — Dr. A. Loesch (*Deutsches Archiv für Klin. Med.*, Band xxi, Heft 2 and 3) found that the subcutaneous injection of 2 centigrammes (0.3 grain) of muriate of pilocarpin in dropsical and non-dropsical cases was followed in a period varying from two to five minutes by diaphoresis and salivation, varying in intensity, but generally lasting an hour and a half or two hours. The loss of weight was as

a rule from 700 to 900 grammes; in some cases it was twice as much, in others much less. The internal administration of 4 centigrammes (0.6 grain) was followed at the end of 23 minutes by an increased secretion which lasted only 15 minutes. Severe vomiting was sometimes observed; this unpleasant symptom also follows the use of jaborandi. Dr. Loesch warns against the use of pilocarpin in cardiac affections, as its effect on the heart's action was always considerable. This was in some cases increased, and sometimes was rendered irregular.

Fränkel (*Charité-Annalen*, 1878) gives an account of experiments on dogs performed by him in conjunction with Leyden, from which the conclusion is drawn that a deleterious action on the heart is not to be expected from the use of the drug. Doses up to 0.6 grain had but little effect on the frequency of the pulse and the arterial pressure, as measured by the kymograph. When the amount injected was increased, the frequency of the pulse was remarkably reduced, even when both vagi were divided; but, when once a certain limit had been reached, there was no further reduction of frequency even under increased doses, provided that artificial respiration were practised. The injection of small quantities of atropia at once interrupted the action of the pilocarpin. These drugs thus seem to be antagonistic in their action on the secretion of sweat.

Dr. Fränkel relates some cases in which the use of pilocarpin was followed by beneficial results. In a case of acute nephritis, 25 milligrammes (three-eighths of a grain) of pilocarpin were injected every day for seven days in succession, then every second or third day; the result was removal of the œdema, and restoration of the normal secretion of urine. In two analogous cases, recovery followed injections made on alternate days for 3½ weeks and 14 days respectively. A fourth case was one of bronchial catarrh with severe cyanosis, œdema, ascites, dyspnoea, and scanty secretion of urine. Expectant treatment and digitalis were useless; treatment by pilocarpin was at once followed by improvement and ultimately by cure.

**CLOËTTA ON THE ACTION OF PILOCARPIN AND COTOIN.**—Dr. Cloëtta read a paper on this subject to the Medical Society of the Canton of Zürich (*Correspondenz-Blatt für Schweizer Aerzte*, Band vii). In healthy horses, the subcutaneous injection of half a gramme of Merk's muriate of pilocarpin was followed in three minutes by an increased flow of saliva; in eight minutes, the pulse rose from 40 to 60; in ten minutes, sweating followed, first at the place of injection, and thence spread towards the head and over the whole body. The temperature in the rectum remained equal; that of the skin fell considerably. The loss of weight (excluding faeces and urine) amounted in 1½ hours to more than 22 pounds—more than 2 per cent.

In man, similar phenomena were produced by the subcutaneous injection of one or two centigrammes (0.15 to 0.3 grain); salivation, feeling of heat in the head, redness of the face, throbbing of the carotids, and sweating on the head and then on the rest of the body. The pulse increased from 20 to 40 in the minute; the breathing was quickened. The use of two centigrammes was generally followed by nausea. The action of the drug lasted one or two hours; the temperature in the rectum was unchanged; that in the axilla fell sometimes as much as 3 or 4 deg. Fahr. No diuretic action was observed.

The results of Dr. Cloëtta's experiments have led

him to question whether pilocarpin has much therapeutic value. Neither in dropsy following heart-disease or chronic nephritis, nor in pleuritic exudations, was the use of pilocarpin followed by improvement.

Dr. Cloëtta cannot give a theory of the therapeutic action of cotoin; but he has found that diarrhoea, especially of the catarrhal form, is arrested in a short time by it; and he recommends a trial of it in the summer diarrhoea of children. He gives adults a decigramme (1.5 grain) several times a day; or, instead of this, and with similar result, 3 decigrammes (4.5 grains) of paracotoin.

**FRONMÜLLER ON THE THERAPEUTIC USES OF COTO.**—Dr. Fronmüller of Fürth contributes to the *Allgemeine Medicinische Central-Zeitung* of July 10 an article on the uses of coto-bark and its alkaloids cotoin and paracotoin. Since the middle of February 1877, he has administered coto and its preparations in about 200 cases. In 143, he has kept tabular accounts of the results, taken at the bedside.

As regards age, 3 patients were between 1 and 10; 27 between 10 and 20; 65 between 20 and 30; 36 between 30 and 40; 7 between 40 and 50; and 5 between 60 and 70. The diseases from which the patients suffered were: tuberculosis of the lungs, 62 cases; typhus (? enteric), 38; catarrhal diarrhoea, 12; acute articular rheumatism, 8; gastric disorder, 6; pneumonia, 6; menstrual colic, 3; bronchitis, 2; œdema of the feet, 2; catarrh, 1; anorexia, 1; diphtheria, 1; albuminuria, 1. Along with these, there were 93 cases of severe diarrhoea, mostly colliquative, and 91 of excessive sweating; these complications often occurred simultaneously.

Of the various preparations, tincture of coto was given in 109 cases in quantities varying from 15 to 500 drops daily—the average amount being 100 drops; in 24 cases cotoin was given, generally in the form of powder, in doses of 1½ to 4½ grains several times daily; in 5 cases, paracotoin was given in somewhat larger doses; and in 5 cases coto-pith.

The clinical use of the preparations of coto was for the most part only directed against symptoms, principally immoderate diarrhoea and excessive sweating.

a. In diarrhoea, against which other remedies had for the most part proved useless, coto was given in 92 cases—85 times in the form of tincture. The diarrhoea was mostly colliquative, following typhus and tuberculosis. In 50 cases the diarrhoea was stopped; it was diminished in 26; and the remedy remained without effect in 9 cases. Of the 50 successful cases, 13 had doses varying from 10 to 50 drops; 12 from 50 to 100 drops; and 25 from 100 to 500 drops, in the course of the day. Of the 9 unsuccessful cases, 4 had from 10 to 50 drops; 3 from 50 to 100 drops; and 2 from 100 to 500 in the day. After some days, the symptoms—especially colliquative diarrhoea—returned, but could be again arrested; frequently, however, the evacuations soon became normal.

It thus appears that the best results were obtained with large doses. The tincture (1 part of coto-bark in 9 of alcohol at 85 per cent.) was used sometimes pure, sometimes mixed with water, and generally was readily taken. It sometimes only happened that the patients complained of burning and irritation in the throat, especially when full doses of the tincture as prepared in the dispensary were given. The tincture prepared by Merk of Darmstadt was milder,



and easier to take. A special advantage of this remedy is, that it is very well borne and generally increases the appetite, while the other ordinary astringents, such as opium, tannin, nitrate of silver, etc., usually produce very unpleasant effects on digestion or on the sensorium. The average dose is 50 drops three times a day, either pure or with sugar or water.

b. As regards immoderate sweating, Dr. Frömmüller observed in the case of a phthisical patient, suffering at the same time from colliquative diarrhoea and sweating, that, under the use of full doses of tincture of coto, both these symptoms disappeared. After this, he gave tincture of coto in 91 cases of excessive sweating; in 34 with complete, in 36 with partial success, and in 21 without result. The beneficial action of coto, which seems to have as its basis the raising of the energy of the blood-vessels of the skin, generally lasted only one night, but often for a longer time. Digestion was not interfered with; the appetite was indeed often increased, so that Dr. Frömmüller was led to give the tincture as a stomachic in the morning in some cases of anorexia. This absence of any injurious effect on digestion gives coto a great advantage over other remedies used to arrest sweating, such as tannin, lead, nitrate of silver, aconite, alum, etc.

Dr. Frömmüller has given cotoin and paracotoin in eighteen cases of diarrhoea of various forms; in nine with complete and in six with partial success, and in three without result. He has also given them in eighteen cases of night-sweat; in eight with complete, in nine with partial success, and in one without result. Paracotoin was given in five cases; cotoin in thirty-one.

The addition of concentrated nitric acid to urine passed about six hours after the administration of cotoin produced a red colour, which, however, was no longer observed a few hours later.

BÄLZ ON PARACOTOIN IN CHOLERA.—Dr. Bälz of Tokio in Japan (*Centralblatt für die Medicin. Wissenschaften*) has given paracotoin with uniformly good result in five cases of cholera during a recent epidemic; his supply then becoming exhausted. It was used in subcutaneous injection in doses of 2 decigrammes (3 grains) dissolved in equal parts of glycerine and distilled water. The Japanese government has decided on the extended use of the remedy, if an epidemic of the disease should again break out. The following brief account of a cure speaks, in the author's opinion, in favour of paracotoin as a remedy of very high value in the treatment of cholera—perhaps the most valuable with which we are acquainted.

M., a strong young woman aged 22, when seen four hours after the commencement of her illness, was in a very apathetic condition, with cold extremities and thready pulse. She vomited frequently, and passed rice-water motions involuntarily. At 4 P.M., 2 decigrammes of paracotoin, dissolved (or rather suspended) in equal parts of water and glycerine, were injected subcutaneously; the vomiting at once ceased. At 5.30 she had a liquid stool; 3 grains of paracotoin were given internally. All the symptoms improved, and the pulse became stronger and regular; the extremities (under the simultaneous continued use of warm clothes, etc.) became warm; the cyanosis disappeared. Five grammes of cognac were given every quarter of an hour. Paracotoin was again injected subcutaneously at midnight; and, an hour afterwards, there was profuse sweating.

The next day, the patient was very weak, but in other respects quite well.

MOLFESE ON ERGOTIN IN DISEASES OF THE BLADDER.—Dr. Molfese, in the *Cirillo* of May 5, 1878, calls attention to the results of the internal use of ergotin in cases of paralysis of the bladder, hæmorrhage, etc. He relates three cases. In the first, a priest aged 86 was suddenly attacked with retention of urine. After this condition had lasted 36 hours, the urine was drawn off by a catheter; it was turbid and contained mucus and pus, and, eight days later, blood in large quantity. Injections of alum, nitrate of silver, and sulphate of zinc, produced no effect. Dr. Molfese then ordered a spoonful of the following mixture every half hour; Bonjeau's ergotin 1 gramme, water 100 grammes, syrup of orange peel 50 grammes. Injections of a very dilute solution of salicylic acid were also given. In eight days, the blood had completely disappeared from the urine. The catheter was used for some days, and after treatment for a month the patient was cured. In the second case, a man aged 72 had retention of urine, which contained mucus, pus, and blood. After the use of ergotin for 20 days, the bladder regained its power. The third case was that of a man aged 51, who had twice suffered from gonorrhoea, specific ulcer, and suppurating bubo. For two months, he had been unable to retain his urine. After the use of ergotin for ten days, the incontinence had nearly disappeared; and, at the end of fourteen days, the patient was cured.

HOFFMANN ON THE USE OF DIGITALIS IN DISEASE OF THE CARDIAC VALVES.—Dr. F. A. Hoffmann of Dorpat says (*St. Petersburg Med. Wochenschrift*, No. 2, 1878) that, while the diagnosis of a disease of the heart is generally easy, it is often difficult to recognise the stage of the disease and to judge of the functional power of the heart. The indications of congestion are not to be depended on; patients with cyanosis, enlargement of the liver, ascites, and anasarca, are often improved by a short course of treatment and feel quite well for some months; while others, following just the same symptoms, are treated the same way in vain, and soon die. Just as little are the arterial tension and the heart's impulse to be depended on; both may be sufficient even until death. Even the distinctness of the heart's sound—apart from the prognostically favourable strengthening of the second pulmonary sound and the cessation of the mitral murmur shortly before death—gives no aid.

Irregularity of the heart's action just becomes a certain sign when the regularity of the heart-stroke can no longer be restored by digitalis. In order to ascertain this, it is necessary to possess a preparation of digitalis of which the action has been thoroughly proved, and to administer a dose of it subcutaneously. In this way, we obtain within twelve hours that information which the internal administration of the drug, or of infusion of digitalis, does not furnish for several days, and often not at all.

This experiment need not be made in cases where the right heart is enlarged towards the left beyond the nipple-line; for in this stage there is a condition of passive dilatation, in which digitalis can no longer do good.

A. HENRY, M.D.

ELLIOTT ON THE COMBINATION OF COD-LIVER OIL AND STEEL.—The difficulty of giving these agents in combination is overcome, according to Dr.

G. T. Elliott (*Lancet*, June 1878, p. 921) by employing a solution of dialysed iron, which, being nearly tasteless, does not produce the nauseous flavour so much objected to.

[It will be interesting to know whether Dr. Bouchardat's estimate of this new preparation of iron be correct. In the *Bulletin de Thérapeut.*, January 30, 1878 (*vide* LONDON MEDICAL RECORD, July 1878, p. 308) he states his belief that the salts of iron are of very inferior efficacy to that of porphyrised metallic iron, and theoretically he regards the dialysed iron as inert, or at least as one of the least active of the ferruginous preparations.—*Rep.*]

**POLLOCK ON THE TREATMENT OF PHTHISIS.**—Dr. James Edward Pollock, referring to the treatment of phthisis in the *Medical Times and Gazette*, June 1878, p. 673, *et seq.*, draws attention to the marked influence that drainage has had in diminishing the death-rate of phthisis, in fifteen towns, as shown in the report of Mr. Simon and Dr. Buchanan to the Privy Council in 1867. In this table a reduction varying from 49 to 11 per cent. is shown in deaths from phthisis, and, singularly enough, while the phthisical death-rate has diminished *pari passu* with the dryness of the soil, diseases of the lung, other than phthisis, have not been reduced thereby. The beneficial influence of high temperature is now known to be a myth, and the advisability of a winter residence in Madeira was not reconsidered after an experimental experience of twenty eligible cases sent, about ten years since, by the governors of the Brompton Hospital (*vide Lancet*, vol. ii, 1866, p. 131). The results of Dr. Buchanan's observations on localisation of phthisis is just this, that the bed of great rivers, alluvial soil, and low, damp, and ill-drained localities, are those where the disease is most prevalent and most fatal. Dr. Pollock's own researches proved that the greatest number of out-patients attending the Brompton Hospital came from the Thames Valley district.

The beneficial influence of in-treatment is seen by an increase of weight in 75 per cent., with corresponding improvement in the local symptoms. Regarding climate, the great object is to secure more open-air treatment and less exposure to damp and cold. For the summer, elevation of locality should be chosen. Let *pure* air be our first requirement, and *bracing* air—that is, dry, and drawn from elevations above plains and alluvial soils—be the next. For winter, shelter from severe winds, exposure to sun, and a short winter, are the chief points. Sea voyages afford many advantages to well chosen cases, if the disease be in the quiescent state, but the vicissitudes of temperature, ill-ventilated cabins, absence of home comforts and luxuries, present many drawbacks, and unless due care be exercised in selecting the case, neither your patient nor his friends will thank you. All stages of the disease do well in much-abused England (a view that Dr. Parkin has carried to the extreme in his work on climate and phthisis).

Cod-liver oil, not exceeding an ounce daily, stands high in Dr. Pollock's estimation; quinine, arsenic, iron, strychnine, and opium, handled judiciously, are of vast value, but let there be no useless drugging; never give a dose of physic without a special object. The cough may be irritative or due to accumulation, and must therefore not be treated with one cough mixture. Bismuth and opium, with blisters over the ileo-cæcal valve are valuable agents in the diarrhoea. Hæmoptysis must be carefully diagnosed, whether

it be passive or congestive. The most successful practitioner is he who conducts his patient through the various incidents of a chronic disease with early treatment of the congestive complications and with the greatest amount of support to his vital powers.

**BATTERBURY ON MILK AS A VEHICLE FOR QUININE.**—Mr. R. L. Batterbury (*British Medical Journal*, June 1878, p. 933) finds milk a very pleasant and convenient solvent of quinine, disguising its bitter taste to a very great extent. One grain to the ounce is scarcely perceived, two grains are not unpleasant. Five grains in a tumbler lose all their bitterness. In the *Journal* for July, p. 44, two other observers confirm Mr. Batterbury's observation.

RICHARD NEALE, M.D.

**HAMMOND ON THE TREATMENT OF FACIAL PARALYSIS.**—Dr. W. A. Hammond writes as follows (*St. Louis Medical Record*). In no disease are prompt measures more necessary than in facial paralysis. A few weeks', and sometimes a few days' delay, is sufficient to diminish the conductivity of the nerve, and the contractility of the paralysed muscles, besides initiating a state of tonic rigidity in the latter, most prejudicial to the attainment of a complete cure.

The paralysis of the muscles supplied by the facial nerve, when induced by cold, I have heretofore found to be generally manageable by the use of strychnia, electricity, passive exercise, and the support to the affected side of the face given by a little hook placed in the angle of the mouth and fastened to the ear by an elastic band. These measures are by no means to be discarded, and one of them, strychnia, is to be even more energetically employed. The improved treatment to which I refer, consists in the administration of strychnia in increasing doses to the point of rapidly—as rapidly in fact as is consistent with prudence—bringing the patient under its full physiological influence.

For this purpose I make use of a solution of the sulphate of strychnia, in the proportion of one grain to the ounce of water. Every ten minims of such a solution contain  $\frac{1}{4}$ th grain of the medicine. Generally I begin with ten minims of this solution three times a day for the first day; the next day eleven minims are given three times, the next twelve, and so on, till the patient experiences a sensation of cramp or rigidity in the legs, or in the muscles of the back of the neck or of the jaw. Usually, the cramp is first felt in the calves of the legs. The further administration is now stopped, and, if necessary, on the following day, the solution is given as before, in doses of ten minims, and the doses are again run up to the extent of producing the muscular cramp.

**POOLEY ON INJECTION OF CRYSTALLISED CARBOLIC ACID FOR THE CURE OF CERTAIN CASES OF HÆMORRHOIDS.**—Dr. Pooley of Columbus, Ohio (*Toledo Medical and Surgical Journal*, November 1877), reports several cases of hæmorrhoids, inflamed and painful, cured by the injection, deep into their substance, of crystallised carbolie acid, liquefied by heat. The instrument was a common hypodermic syringe, and the quantity used was five or six drops for each injection, each hæmorrhoid was injected in succession. The pain was slight and soon ceased. The carbolie acid caused a slough, which soon separated, and the cure was accomplished in a week or ten days. The cases to which this treatment applies, are those of inflamed and irritable hæmor-



rhoids, either external or partly contained within the rectum. This treatment is contraindicated for internal bleeding piles, and for those wholly external that are flabby and comparatively harmless.

**HUCHARD ON OPIATES IN CEREBRAL ANÆMIA AND DISEASES OF THE HEART.**—Dr. Huchard (*La France Méd.* 1878, p. 164; from *Four. de Thérap.*) speaks of the good results obtained by the administration of opium to persons suffering from insufficiency or narrowing of the aortic valves. He gives numerous instances in which the happy effect of this remedy has been manifested. In the course of certain affections of the heart, where the attacks of suffocation and of dyspnoea have acquired an extreme intensity, injections of morphia are of great service.

Opium, given in the dose of one to two centigrammes (gr.  $\frac{1}{8}$ – $\frac{1}{4}$ ), produces slight excitement of the circulation, animation of mind, and increase of muscular force; if the dose be pushed to five or ten centigrammes, depression of the circulation, with a tendency to sleep, is brought about. M. Gubler, in his *Commentaires*, urges the utility of opium in want of stimulation of the nervous centres, through an impoverished or altered blood; and Dr. Vibert suggested a year or so ago that injections of morphia should be practised previously to the operation of thoracentesis, and even in every operation where there might be danger of syncope, with a view to prevent its occurrence. It is for the same reason that Dr. Huchard has employed this drug. In cases of narrowing or insufficiency of the aortic orifice, where patients present the symptoms of asystole, with suffocation, dyspnoea, cold sweats, paleness of the face, albor of the extremities, etc., he has seen all these symptoms diminish after the hypodermic injection of one centigramme ( $\frac{1}{10}$  gr.) of morphia. M. Huchard says that if opium is useful in aortic affections accompanied by vertigo, tinnitus aurium, tendency to deafness, cephalalgia, and occasional dilatation of the pupil, it is because it overcomes the cerebral ischæmia. For this reason, opium may be used as a tonic in many anæmic conditions, as phthisis.

**BORACIC ACID IN SKIN-DISEASES.**—Neumann (*Centralbl. für Chir.*, No. 8, 1878) has employed boracic acid, sometimes alone, sometimes in connection with oil of cloves, in the fluid form and in ointments. In pityriasis versicolor and tinea tonsurans, alcoholic solutions, 10 to 300 with 2.50 of oil of cloves, and 20 to 300 with 3.0 of oil of cloves, have been used. In pityriasis rubra and all varieties of eczema, the acid has been employed in the form of ointments of 10 to 50. Neumann considers the remedy a valuable one.

#### RECENT PAPERS.

- On the Treatment of Croup by Injections of Perchloride of Iron into the Trachea and Larynx by means of Pravaz's Syringe. (*L'Union Médicale*, July 25.)  
 On a New Method of External Metallotherapy. By Dr. Vigouroux. (*Le Progrès Médical*, July 27.)  
 On Metallotherapy. By Dr. Westphal. (*Berliner Klin. Wochenschrift*, July 20.)  
 Cold Water Enemata as a Therapeutic Agent in Chronic Diarrhoea. By Dr. M. J. B. Messenger. (*American Journal of the Medical Sciences*, July.)  
 On the Importance of Combining Morphia with Quinia in the Treatment of Malaria Fever. By Dr. M. Lewis. (*American Journal of Medical Sciences*, July.)

## OBSTETRICS AND GYNÆCOLOGY.

**MOFFAT ON DISLOCATION OF THE HUMERUS IN PUERPERAL CONVULSIONS.**—In the *Glasgow Medical Journal*, June 1878, Dr. Robert Moffat relates a case of puerperal convulsions during which the right shoulder-joint became dislocated. The convulsions occurred on the 5th and 6th of January. The patient was delivered on the 5th of a female live child by instruments. On the morning of the 7th she felt well in every respect, except an intense pain in the right shoulder. Some days later, when the swelling round the shoulder had subsided, it was found that a subcoracoid dislocation of the humerus was present. The patient was placed under chloroform and the dislocation reduced.

**CHABALIER ON INJECTIONS OF MORPHIA IN IRREPRESSIBLE VOMITING OF PREGNANCY.**—In the *Lyon Médical*, June, 1878, Dr. Chabaliér relates a case in which by giving an injection of morphia morning and night for two months a patient was able to partake comfortably of vegetables, soup, meat, etc., and to keep nutrition in a fair state. When Dr. Chabaliér abandoned the injections at  $4\frac{1}{2}$  months gestation, the patient suffered for three days from excessive agitation and excitement. During these three days, involuntary muscular movements and insomnia were present. The labour was natural, and the child furnished no evidence of being affected in any way by the morphia. Since then, Dr. Chabaliér has twice had recourse to the same mode of treatment with equal success.

**PUREFOY ON THE HYPODERMIC INJECTION OF CHLORAL IN PUERPERAL ECLAMPSIA.**—In the *Proceedings of the Dublin Obstetrical Society* are related by Dr. Richard Purefoy the details of two cases of puerperal convulsions, which were treated by chloral administered subcutaneously. The first patient, aged 18, had been subject to fits from the early age of five: they occurred at first only after intervals of a year or more, but as she grew older they increased in frequency and severity. In January 1877, she had seven consecutively, and in April eleven in one day. About this time, though unmarried, she became pregnant, and fretted in consequence. Her confinement took place prematurely about the sixth month. When Dr. Purefoy arrived, a small putrid foetus had been expelled without any loss of blood. She was seized with convulsions, Dr. Purefoy administered chloroform and injected five grains of chloral in thirty minims of water into the thigh. This dose was repeated about half-an-hour after. The patient recovered. The second case occurred in the Rotunda Hospital, a single primipara was delivered of a still-born child. The seizures occurred after delivery. Four doses of five grains of chloral were injected with most satisfactory results. Dr. Purefoy remarks that the danger of an abscess is avoided by injecting the chloral into the muscular tissue.

**SKENE ON THE TREATMENT OF LACERATIONS OF THE CERVIX UTERI.**—In the *Proceedings of the Medical Society of the County of Kings*, June 1878, Dr. A. J. C. Skene says that in cases of lacerated cervix, before performing Emmet's operation, he resorts to the following preparatory treatment. About ten days before the final operation he brings the parts together, without any freshening of their surfaces,

and confines them by means of a small piece of sheet lead on each side of the cervix, held in position by a silver suture passed continuously through both ends of the leads. He then plugs the vagina with marine lint, thereby protecting the surrounding parts from the chafing of the clamp. At the end of a week, the clamp is removed, and a softened and improved condition of the os is found. Three days later he operates, and has rarely a failure in a case so treated. Dr. Skene has also used silk sutures for bringing the everted lips of the os together with perfect success.

**LEBLOND ON THE REMOVAL OF UTERINE CERVICAL STENOSIS BY ELECTROLYSIS.**—In the *Annales de Gynécologie*, May 1878, Dr. Leblond says that the cure of stricture of the urethra in man by electrolysis suggested the idea of treating stenosis of the cervix uteri in the same manner. Dr. Leblond performed this operation in the case of a lady aged 45, the negative pole being applied to the cervix, and the positive pole to the patient's right thigh. It is advisable in the use of electrolysis to apply the negative pole to the cervix, because the cicatrix which results is not so contractile as that caused by the positive pole. Dr. Leblond thinks that electrolysis may be used with advantage in some cases instead of the bistoury or other means.

**DOHRN ON A CASE OF CÆSAREAN SECTION POST MORTEM: DELIVERY OF TWINS.**—In the *Deutsche Medicinische Wochenschrift*, July 6th, 1878, Professor Dohrn relates the following case. He was called at 7 p.m. on May 10th to a primipara at term, who had had twelve eclamptic convulsions since 11 o'clock in the morning. As he entered the patient's room at 7.5 she was moribund. At 7.15 she breathed her last. The foetal heart could be heard, and Dr. Dohrn therefore at 7.20 extracted a child asphyxiated, but whose heart was still beating; artificial respiration was resorted to in vain. Whilst Dr. Dohrn was engaged in applying artificial respiration to the child he had just delivered, his colleague who had remained by the body of the mother, exclaimed "here is another child." Dr. Dohrn at once delivered the second child, whose heart was also beating like that of the first. Artificial respiration was also unsuccessful in the second case. Dr. Dohrn attributes the deaths of the twins to the poisoning of their blood by the uræmia of the mother.

**MUNDÉ ON THE BLUNT WIRE CURETTE IN GYNÆCOLOGICAL PRACTICE.**—In a recent article, Dr. Paul Mundé exposes the dangers which may arise, such as perforation of the uterus and peritonitis, from the use of Recamier's curette. Sims's curette, which is a modification of Recamier's, is, in the author's opinion, open to the same objections. Dr. Mundé's object in writing the paper was to draw the attention of gynæcologists to the advantages of Dr. Thomas's "copper wire curette without cutting edge". This is an instrument 9 inches long,  $3\frac{1}{2}$  inches of which form the wooden handle, made of soft copper wire  $\frac{1}{8}$  inch thick near the handle and tapering down to  $\frac{1}{16}$  to  $\frac{1}{8}$  inch in thickness at  $\frac{1}{2}$  inch from the end, where it is bent into an elliptical loop  $\frac{1}{4}$  inch broad, the wire at the loop being flattened on the scraping surface. The wire at the commencement of the loop is so soft and flexible that any greater than a superficial pressure will cause it to bend, whereby a

deep injury to the uterine mucous membrane is absolutely avoided. It may seem that this flexible blunt loop of wire is too frail to be of real service, but experience has shown that it answers the purpose for which it was intended, and that gently drawing it over the uterine mucous membrane suffices to detach the projecting vegetations or granulations, and to cure the case. The one indication for its use is pathological uterine hæmorrhage which has resisted all other remedies, and for which no physical cause, constitutional or local, can be detected by the usual means of exploration.

**LINTON ON DOUBLE FŒTATION.**—In the *American Practitioner*, April 1878, Dr. Linton relates a case of double fœtation. He was called on May 23rd 1869 to a primipara pregnant since the end of January, who was flooding severely. He found the os dilated to the size of a half-crown, and a central placental presentation. A tampon was applied. Next evening at six o'clock expulsive pains set in, and a fœtus with placenta were expelled. She recovered perfectly. Five months later Dr. Rossett delivered her of a live female child weighing 9lbs. 8 oz.

**ROSSETT ON COINCIDENT INTRA-UTERINE AND EXTRA-UTERINE GESTATION.**—In the *American Practitioner*, April 1878, Dr. Rossett records the following case. Mrs. M., aged 27, married four years, primipara, tall and robust, menstruated last in November 1875. On 26th March 1876, she was seen by Dr. Rossett on account of pain in the right iliac region. He found there a tumour as large as a small foetal head, firm and solid. There were morning sickness and mammary and other symptoms of pregnancy. Examination showed the os to be soft and patulous. The uterine sound was not used. After consultation with several *confidères*, Dr. Rossett concluded that the iliac tumour was an extra-uterine fœtation. During the latter part of April, an intra-uterine pregnancy was found to be present. On 5th August, he delivered her of a dead female child. The iliac tumour remained. Two weeks afterwards, septicæmia set in. The patient was dangerously ill for some weeks, and the case was regarded as hopeless. On the 15th October, a portion of a decomposed fœtus was found protruding at the vulva. It was discovered that this gained egress through the os uteri. Portions were discharged from time to time, the tumour undergoing marked diminution. Four months later, the patient's health was completely re-established.

FANCOURT BARNES, M.D.

**HOBBS ON MISTLETOE AS AN OXYTIC.**—Dr. Arthur G. Hobbs reports (*Louisville Medical News*, May 28) that about three years ago he was informed by Dr. W. H. Long, of Louisville, of the superior properties of viscum album (mistletoe) as an oxytotic. He then determined at the first opportunity to try its merits. During the last fall he had some leaves of the viscum album gathered, and he made an infusion of two ounces to the pint. Not waiting for the leaves to dry, he used them green, and doubled the quantity. He reports three successful cases, and adds that his short experience with the parasite is, that it acts more promptly and more decidedly as an oxytotic than ergot. In the few cases in which he has used it he has had none of the troublesome "after-pains" that are often observed when ergot has been given. The dose employed was from one to two ounces, repeated at intervals.



**CUTTER ON THE ELECTROLYTIC TREATMENT OF UTERINE FIBROIDS.**—At the recent meeting of the American Medical Association, Dr. Ephraim Cutter, of Boston, gave a brief *résumé* of the treatment of fifty-eight cases of uterine fibroids by electrolysis as practised by Dr. Gilman Kimball, of Lowell, and himself.

Reference was first made to those cases in which electrolysis was applied without anæsthesia. The difficulty which was first experienced in introducing the needle into the dense fibroid without having it twist in the hand of the operator was referred to, and such difficulty had led to the use of a needle having very much the shape of a surgeon's grooved director.

The results obtained in a little over fifty cases, as given from memory, were as follows. There were four deaths. There were seven cases in which no relief had been obtained. In three cases relief from symptoms had been obtained, but the size of the tumour remained unchanged. Four cases were entirely cured. In thirty-two cases the tumours had been diminished in size, and relief of symptoms had followed the operation. In these cases the operation was simply undertaken to arrest the growth of the tumour. In the great majority of them the growth was arrested, and the average reduction in the size of the tumour was one-third in cases in which any diminution in size occurred. The peritoneal inflammation which had followed the operation had been very slight, and of brief duration.

In one case, abscess was formed. The puncture was about 1½ inches deep, and the abscess was about four inches deep. In one case fistulous openings were created by the improper protection of the needle where it passed through the skin.

They continued to use the same kind of battery as at first, namely, one with large plates. It was their impression that what was needed for the operation was quantity and not intensity of the electrical current.

It was their opinion also that it was not advisable to prolong the operation over fifteen minutes; from five to ten minutes was an average length of time. In no case should the operation be performed at the office of the physician. The first operation should not be continued longer than three minutes.

In a majority of the cases the needle was introduced into the tumour through the abdominal wall, but there was no rule with reference to that point. In one case both electrodes were introduced through the rectum. Of the two outlets, they preferred the rectum to the vagina.

The manner of introducing the needle was regarded as important; it should be introduced with a single thrust. The manner of its withdrawal was also important; firm compression of the tissues surrounding the needle should be made, in order to prevent separation of the various layers, and then the needle withdrawn quickly. Since they had used anæsthetics no alarming symptoms had been developed in the way of shock, etc., and Dr. Cutter believed it to be unwise to attempt to perform the operation without the aid of an anæsthetic.

Dr. George M. Beard, of New York, remarked that he began to experiment with reference to the electrolytic treatment of fibroids of the uterus in 1870, and used a long, spear-shaped electrode, something like that described by Dr. Cutter. He then used only one pole, the negative, and through the vagina. Afterwards, he carried on the same line of investigation with reference to other tumours, and had noticed

with reference to electrolytic treatment of fibrous tumours about the neck, that some of them went down rapidly under treatment, and never returned, while others were reduced perhaps 25 per cent. in size, and then remained permanent. He agreed with Dr. Cutter with reference to the use of a mild current, and the time to be occupied at each application.

Dr. Beard recommended that the negative pole should be first used, and perhaps afterwards both poles might be employed. In some cases good results could be obtained by the use of the negative pole alone. He had sometimes used the faradic current without the needle. The accessory symptoms connected with uterine fibroids, such as excessive hæmorrhage, anæsthesia, neuralgia, and the various effects upon the general nervous system, were almost always greatly and quickly relieved by either method.

#### RECENT PAPERS.

Study on Perineoraphy performed immediately after Delivery. By Dr. G. Eustache. (*Bulletin Général de Thérapeutique*, July 15.)  
Obstetrical Anæsthesia. By Dr. Dumontpallier. (*L'Union Médicale*, July 16, 18, and 20.)

#### PSYCHOLOGY.

**JUNG ON GENERAL PARALYSIS OF THE INSANE IN WOMEN.**—This paper was read by Dr. Jung at the meeting of the Psychiatrischer Verein zu Berlin in December last, and is published in the *Allgemeine Zeitschrift für Psychiatrie*, Band xxxv, Heft 2. The conclusions arrived at are based entirely upon the statistics of and observations made in, the Leubus Asylum: though they are perfectly justified by the facts, it must be remembered that they are only shown to hold good in that neighbourhood and among the lower orders treated at that asylum, also that they cannot be generally applied without being confirmed by more general observation. The author thus summarises his results. General paralysis of the insane among women of the lower orders has, of late years, considerably increased in frequency. This increase is only a further expression of the increasing misery and decreasing power of resistance (*Widerstandskraft*) among these classes. The disease generally makes its appearance at the time of the menopause, whether this be normal or premature; it is, in fact, a disease of the climacteric. An individual weakness of the nervous system (either congenital or acquired) and a soil prepared or fitted for vaso-motor disturbance are necessary to the development of the disease; heredity also plays an important part in its causation. The affection occurs in women, on an average, ten years later in life than in men; *i.e.*, usually between thirty-five and forty-five. It lasts, on the average, from one to two years; its course is seldom stormy and rapid, but rather of a chronic character. In the nature of the delusions no difference exists from those observed in men of the same social position. It is generally preceded by a short melancholic stage. Sexual excess was not observed as an essential exciting cause of the disease either in men or women of the lower orders. Among men, injuries to the head and nervous diseases were noted as the most frequent causes. The paralytic women were either childless, had but one child, or the children were born dead or had died very young.

## OPHTHALMOLOGY AND OTOLOGY.

GIRAUD-TEULON ON THE USE OF OPERA-GLASSES IN CONNECTION WITH THE VARIOUS FORMS OF AMETROPIA.—The use of opera-glasses is often attended with very great inconvenience as regards vision; and this is due, according to Dr. Giraud-Teulon (*L'Œil*, deuxième édition, 1878), to the indifference displayed in their fabrication, with reference to the great variety of refractive power in the eyes of those who use these instruments. When the optic axes are parallel, as when the eyes are directed to any distant object, binocular vision results without effort, the accommodation of the two eyes being perfectly relaxed; and if the tubes of the opera-glasses be distant from each other by the same space which separates the pupils, the conditions of ordinary vision are realised; but if the distance between the tubes vary, either more or less, then double images are produced, homonymous if the distance between the tubes be greater than that between the pupils, and crossed if the distance be less. Now, the eyes have greater difficulty in uniting homonymous images which are separated by a slight interval than is the case with crossed images; it is extremely important, therefore, to use opera-glasses the tubes of which exactly correspond to the distance between the eyes. Glasses which are too wide should be carefully avoided.

In myopia, the optic axes have a tendency to diverge, and distant objects give rise to images which are slightly crossed; and, in such a case, the ocular lenses should be rather more distant from each other than the object lenses; that is to say, they should be capable of being shifted laterally, and from within outwards.

With hypermetropia the reverse is the case; the ocular lenses should be nearer to each other than the object lenses; *i.e.*, they should be capable of lateral movement from without inwards.

Dr. Giraud-Teulon believes that, if opera-glasses were constructed so that the ocular lenses were capable of lateral movement, very many people who are now unable to use them would be able to do so, and without fatigue or inconvenience of any kind.

BOWATER J. VERNON.

### RECENT PAPERS.

Possible Dangers of Tattooing the Cornea. By M. Panas. (*Gazette des Hôpitaux*, July 23.)

## FORENSIC MEDICINE.

[DR. MAURICE LANGIER, in *La France Médicale*, analyses the articles published in the course of the year 1877, and the questions which have arisen on the subject of various crimes.]

DELENS ON MALFORMATIONS OF THE HYMEN IN THEIR RELATION TO LEGAL MEDICINE.—Under this title, Dr. Delens has published three cases taken from his medico-legal practice. The first is that of a girl 15½ years of age, who was the victim several years ago of repeated assaults, was even afflicted with vulvitis and vaginitis, but yet not deflorated. The integrity of the hymen in this case was explained by its formation. It was thickened to at

least 1 millimetre (.04 inch), and was pierced by a hole only 1 millimetre in diameter, and was as resistant as an imperforate hymen. From the absence of laceration it may be inferred that repeated violence was not exercised. The two other cases are very rare examples of biperforate hymen. In one of these cases the two openings were not more than two centimetres (.8 inch) in diameter; in the other, they were seven or eight millimetres by three or four. In cases of this kind the median and solid portion is an obstacle to defloration, which is the more serious as the openings are smaller. The expert should take this circumstance into account.

GALLARD ON THE EXAMINATION OF SEMINAL STAINS FOUND ON THE WOODEN FLOOR OF A ROOM.—Dr. Gallard, in an article in the *Gazette des Hôpitaux*, 1878, No. 44, arrives at the following conclusions. 1. The examination of these stains may give as authentic results as that of stains on linen or clothes. 2. If the semen form a sort of slightly adherent varnish on the floor, the flakes of which are easily separated, the examination is less difficult than when it has to do with linen or cloth, as it is only needful to dissolve the dried semen in a little distilled water. But if the semen have soaked into the wood, a little water must be placed in contact with the stain for a time, and then the wood must be scraped with a scalpel.

PINARD ON PLEURAL ECCHYMOSES IN NEW-BORN INFANTS.—Dr. Pinard has written a book on *Subpleural Ecchymoses in New-born Children*, which may be summarised in the two following statements. 1. Punctuated subpleural and subpericardial ecchymoses may be found in infants which have died from arrest of the circulation at the beginning or near the end of labour, or even several moments after birth, as well as in those which have died from suffocation. 2. Ecchymotic stains may be found on the lungs, pericardium, and thymus gland of children who have died several hours or days after birth, in consequence of the conditions in which they were found during labour, the lungs being fully inflated with air.

GUNSHOT WOUNDS.—The affair of Godefroy (1877) led to the repetition of several very conclusive experiments, which prove that in the old conditions where defective wadding and powder were used, a shot fired with the muzzle of the gun close to an object inevitably caused tattooing of the parts surrounding the wound. It is not so now; for, with the predominance of the fulminate of mercury, the combustion of the particles of carbon is much more complete. It may therefore be affirmed that the absence of tattooing can be no longer considered as a certain proof that a shot has not been fired close to an object.

ACCIDENTAL AND CRIMINAL POISONING.—The following cases are collected by M. Lauger.

1. By *Crosnier's Pills*, which are analogous to those of Méglin, but differ notably from them in that the oxide of zinc is replaced by aloes and the sulphate of quinine. They constitute an active and dangerous drug, which should be proscribed.

2. By *Opodeldoc Balsam*, by the camphor and ammonia which it contains. A single tablespoonful administered by the mouth has caused acute inflammation of the pharynx, œsophagus, stomach, and intestines, followed by death in several hours.

3. By the purple and beetle-like fly (*le méloë procarabæus et violaceus*), given by a quack in a powder



for gout. A large number of black and blue particles were found in the stomach and intestines, which were recognised as belonging to a beetle.

4. *By Digitalis*.—A young German soldier took 137 pills containing about 211 grains of powdered digitalis leaves, to make himself ill in order to procure his liberty. Death supervened after five weeks. This is a rare example of chronic digitalis poisoning.

5. *By Hellebore*.—After ingestion of from two to four grammes of powdered black or white hellebore, or of decoction of the root.

6. *By Laburnum*.—Five members of a family succumbed after a repast at which they partook of fritters prepared with the flowers of laburnum, each person not having absorbed more than two drachms of the flowers, representing a very minute quantity of the alkaloid cystisine, which is very active, and acts in very small doses.

7. *By Lead*.—A baker was poisoned in heating his furnace with waste pieces of wood, which had been several times repainted with white lead (*Gazette des Hôpitaux*, No. 23, 1878).

8. *By Phosphorus*.—Analyses made by Breslau on bodies poisoned by phosphorus, and a medico-legal necropsy, have shown that phosphorus may be successfully sought for in a body more than a month after death. This assertion enlarges the field of medico-legal investigations, since it is known that phosphorus is generally transformed in a few days into phosphorous and phosphoric acids, and therefore does not exist as phosphorus when the *post mortem* examination is made.

9. *Latent Ulcer of the Stomach may simulate Poisoning*.—M. Littré has maintained that the alleged poisoning of Henrietta of England, Duchess of Orleans, was really nothing else than perforation of the stomach from a simple ulcer, all the symptoms of which she had experienced for some time. M. Grasset (of Montpellier) relates a similar case. A young man, twenty years of age, robust, and always in very good health, was attacked by severe colic after a walk of eleven kilomètres (more than twenty miles), and a hurried breakfast, and died in twenty-four hours. His family thought that he had been poisoned, and caused a necropsy to be made, when an ulcer of the stomach was demonstrated, which remained latent till just before death, and then produced perforation, followed by acute peritonitis. The legal physician, therefore, should not lose sight of the fact that the absence of pathological antecedents and perfect external health do not exclude the idea of chronic ulcer of the stomach and spontaneous perforation of that organ.

BERGERON AND MONTANO ON DEATH BY SUBMERSION.—MM. Bergeron and Montano, after a series of experiments in M. Bert's laboratory, arrived at the following conclusions.

1. The existence of a frothy foam in the pharynx, larynx, and bronchi, is the only constant and certain sign of death by submersion, though the individual may have had previous syncope or asphyxia, whether he may have been free in his movements or thrown into the water after being made insensible by chloroform or opium, half suffocated, fettered in his movements, etc. 2. There is always a certain degree of congestion, and sometimes subpleural ecchymoses, but the latter have never the appearance of punctuated ecchymoses from suffocation. 3. The intensity of the congestion, and the extent of the ecchymoses always correspond to the efforts which the animal made in struggling against submersion. It

is so also in man, as has been verified in all *post mortem* examinations made at the Morgue during the last ten years. M. Langier admits the last two conclusions, but makes reservations as to the general application of the first.

FOVILLE ON GENERAL PARALYSIS.—M. Foville (*Annales Medico-Psychologiques*, 2<sup>e</sup> série, tome xlvii) has published six very curious observations relative to the stage of general paralysis which some authors have named the medico-legal stage, because during it patients frequently perpetrate reprehensible or criminal actions, under the influence of hallucinations. As the symptoms of the disease are generally but little marked at this stage, and may be overlooked, it happens that judicial prosecutions are directed against these unfortunates and are frequently followed by condemnation. This shows the importance of medico-legal evidence in such cases.

MOREAU ON COOK'S INSANITY.—M. Moreau, of Tours, from laborious researches has arrived at the following conclusions. 1. The slow action of carbonic oxide causes a series of intellectual disorders having a course peculiar to themselves. 2. These disorders consist of hallucinations of sight and hearing, of insane delusions, restlessness, and morbid apprehensions. They are not accompanied, in the majority of cases, by hereditary predisposition, vertigo, bewilderment, depression, nor syncope. 3. Recovery takes place without relapse, when the patient is young, or when the disease is not far advanced, provided she does not resume the same occupation. In all other cases the malady becomes rapidly worse, and terminates in death.

INTELLECTUAL DISORDERS IMPUTABLE TO HUNGER.—A prolonged fast may give rise to nervous disorders resembling hallucinations, which diminish if they do not abolish the exact consciousness of surrounding circumstances, and lessen or even cause to disappear the responsibility of certain actions. Thus, a youth fifteen years of age, of pleasing character and quick intelligence, without personal or hereditary epileptic antecedents, was convicted of an attempt to murder a girl eight years of age. He had been wandering forty-eight hours in the country without food, when he attacked his victim with a violence for which no motive could be discovered. To all questioning he replied, "I was hungry; I had lost my head."

ESTERLEN ON THE HUMAN HAIR AND ITS MEDICO-LEGAL VALUE.—This is the title of a paper published at Tübingen by Professor Esterlen (*Annales d'Hygiène*, 2<sup>e</sup> série, tome xlviii). The first point of importance is to distinguish human hairs from those of animals. The latter are distinguished by the larger and more prominent epidermic scales, by the medullary canal, which is constant and much smaller in comparison to the thickness of the cortical part, by the sudden change of colour, when the dress is differently coloured, by the middle part of the hair being swollen, becoming rapidly smaller towards the root as well as towards the free end. Such a number of distinctive characteristics will scarcely allow error. Having acknowledged that the hair is human, is it possible to discover to whom it belongs? It is possible; but only on condition that a lock can be examined, or at least such a number of hairs as to allow an average to be taken. The examination of hairs from the genitals for spermatozoa should be made, according to Paff, in the following manner. Moisten the hairs with a drop

of the solution of ammonia, and examine them under the microscope after evaporation of the liquid. After having dealt with the question of how to know whether hairs have been torn or cut, and having established that the colour of children's hair is quite independent of that of the parent's, and can prove nothing with regard to filiation, (Esterlen treats of spontaneous and artificial change of colour. Prolonged contact of the hair of a dead body with decomposing organic matter makes it darker (Chevalier). Long burial has a contrary effect, because of the action of moist acids, but the original colour can be restored by treating the hair with ammonia (Hauptmann and Sonnenschein). Esterlen thinks that artificial coloration may be easily recognised by the microscope, as it presents an equality of colour which never exists in nature. The original colour is restored by the addition of a drop of nitric acid, which destroys the sulphuret of lead and the bismuth which made it deep black and opaque, or the nitrate of silver which gave it a violet brown colour.

## REPORTS OF FOREIGN SOCIETIES.

### ACADEMY OF MEDICINE IN PARIS.

May 14. *Homicidal Lunatics*.—Dr. Blanche read a memoir on the criminal acts performed by lunatics in their relations with the several forms of insanity. According to the writer, there is no form of insanity which can be denominated homicidal monomania. Homicide may be committed by insane persons suffering from various mental affections; the patients are subject to crises of what is termed congestive excitement, of varying duration and intensity, and showing itself by signs which should arouse suspicion. Alcoholism, epilepsy, the hallucination of persecution, are diseases in which these crises are most generally noted. But patients suffering from congenital or acquired cerebral affections, characterised by more or less indefinite disturbances of the intelligence, may be disposed under that passing influence to commit murders or acts of violence not in harmony with their ordinary pathological condition.

*Spinal Gout*.—Dr. Ollivier read a case of spinal gout. This variety of visceral gout was characterised by infiltration with urates of the external surface of the spinal dura mater. Up to the present time these manifestations, of which the gouty character had not been proved, had been rather suspected than described.

*Influence of High Temperature on Anthracoid Affections*.—M. Colin read a memoir on the influence of high temperature on the development of anthracoid affections. M. Pasteur, at the meeting of March 19th, had given it as his opinion that the high temperature of birds was the obstacle to the development of charbon in their organism, and as a proof had brought a hen, which, having been inoculated after the temperature was lowered, had died. M. Colin was not of the same opinion: his experiments had led to the following results. 1. There is no constant relation between the normal temperature of animals and their aptitude or non-aptitude to contract charbon. Some are prone, and others resist this affection in an equal degree. 2. The artificial lowering of the temperature of gallinaceæ to 40° C. (104° Fahr.) does not induce the development of the

anthracoid affection, though at 40° this affection becomes rapidly developed in sheep, rabbits, and other animals. 3. The depression of the temperature to 38 and 37 degrees in carnivorous animals, such as full-grown cats and dogs, is equally powerless to originate the anthracoid condition in the entirety of the organism. 4. Low cutaneous or subcutaneous temperature, even when increased by baring the skin or by cold baths, does not seem to exercise a very sensible influence on the manifestation of accidents at the points where the virus has been inserted.

May 21. *Febrifuge Action of Quinodine*.—M. Burdel read a paper on the febrifuge action of quinodine in the treatment of telluric fevers. The sulphate of quinine remains the best drug for intermittent fever, and it is in vain that recourse has been had to its numerous succedanea to take its place on account of its high price. Whenever an energetic and prompt treatment is required in serious and acute cases, recourse must be had to quinine; but in telluric fevers, with persistent and mild symptoms, especially in quartan fevers, quinodine acts just as well. The tendency of these fevers to relapse when they break out at the end of the summer or the beginning of the autumn, is well known. To definitely root out the disease, the treatment must be continued. The sulphate of quinine would be much too expensive for country practice; quinodine, much cheaper, is equally effective under the circumstances. Like all febrifuges, it must not be given in large doses, but for three or four weeks in continuous as well as in intermittent doses. M. Burdel described the method he adopted, and said that he preferred quinodine in the chronic state.

*The Dressing of Wounds*.—M. Chassaignac participated in the discussion on the treatment of wounds. After having rectified some errors respecting the date of his labours, and defined the true share which appertained to him in the progress made since 1839, he related how the occasional dressing by occlusion, which he had always preferred, and which he had successfully employed since 1839, led him to actual drainage. At the time when his treatise on suppuration was published (1859) no application of drainage had been made either to amputations or to gun-shot wounds. This twofold chasm has been amply filled up, as several works testify, notably that of Christot on the treatment of gun-shot wounds, of which he cited two cases in which success is owing to this method. M. Chassaignac wound up by the following conclusions. Two fundamental indications should regulate the treatment of wounds; to protect them, and to secure the free egress of whatever is injurious to them. There is a plan of dressing which, in wounds occasioned by crushing, and laceration of the hand and foot, removes the chance of purulent infection with almost absolute certainty. This is the treatment by elastic occlusion. All patients suffering from chronic suppuration, traumatic or otherwise, are safe from purulent affection so long as they do not undergo any surgical operation. In the same degree as infection is common in traumatism with open blood-vessels, so it is uncommon in traumatism with closed-up vessels.

*Bone-Drainage in Osteomyelitis*.—M. A. Desprès read a paper on bone-drainage in necrosis, and specially in osteomyelitis, of which the conclusions were as follows. 1. In osteomyelitis, with spontaneous fracture of the long bones, whenever the articulations are intact, the limb may be preserved by the help of an incision reaching the bone by



*debridements* on the adjacent parts attacked by abscess, and by passing a drainage-tube into the focus of the fracture through the open abscesses round the bone. 2. The drainage-tube ought to be left *in situ* for a year, so as to place the central necrosis of the bone in the condition of a superficial slough at the bottom of a wound of the integument, with loss of substance. 3. Drainage of the bones attacked by osteomyelitis, as well as of disarticulations performed under the same conditions, is performed whilst the patients are in a febrile condition.

May 28. *Osteomyelitis during Growth*.—Dr. Lannelongue read a memoir on osteomyelitis during growth. This paper, based on a large number of clinical facts, may be thus summarised. 1. The affection described by writers under the names of acute necrosis, phlegmonous and acute periostitis, epiphysary osteitis, etc., is in reality only an acute osteomyelitis. 2. The long bones are the most exposed to it. 3. In the long bones its primary seat is in the sheath which unites the diaphyses and the epiphysis. The cartilage remains intact in the proportion of 15 to 20 per cent. 4. One of the earliest consequences of osteomyelitis is a detachment of the periosteum with subperiosteal abscess. Parallel with the necrosis and the thinning of the bone, a work of repair goes on with the object of building up fresh bone. 5. Articular complications are not always present. Their appearance gives greater gravity to the prognosis of the affection. 6. So soon as the diagnosis of the affection is decided, trephining of the bone is the only method of which the opportuneness and the indications in its favour are incontestable.

#### *Action of Heat and Cold on the Animal Organism.*

—Dr. Delmas, of Bordeaux, read a paper on the action of heat and cold on the animal organism. It may be summarised as follows. 1. During the administration of the cold douche, whether preceded or not by the employment of heat, given at a temperature of from 50 to 77° Fahr., and lasting from thirty seconds to five minutes, the central temperature of the body and that of the intermediate zone is not at all or very little lowered. 2. The exercise following the application of a cold douche has the true physiological result of bringing on a persistent lowering of the temperature, and in the same way a diminution in the quickness of the pulse and a lowering of the arterial tension. 3. Under the influence of a cold application, the summum and the minimum of the quickness of the heart correspond to the summum and the minimum of the arterial tension. 4. After the application of a cold douche, the patient really becomes colder, and his temperature, or that of the central intermediate zone, becomes lowered precisely when he feels a sensation of heat, and on the contrary rises or remains at its usual height when he is shivering.

*The Graphic Method*.—M. Marey read a paper on the importance of the external signs of the functions of life from the medical point of view. The majority of the functions of life are manifested by certain external signs, which our senses only perceive in a rough way, but which, delicately analysed, would give valuable information on the action of the organs, and would sometimes indicate the slightest derangements in them. This delicate analysis is obtained by the use of the graphic method, which affords information of the greatest importance concerning the functions of the nerves, respiration, circulation, etc. Equally applicable to the study of the animal crea-

tion as to man, it establishes a new link between physiology and medicine, and gives these sciences the opportunity of mutually supporting each other. As an example, M. Marey pointed out what the graphic method can reveal on the manner in which the muscular function acts in either a healthy or a diseased patient, and then what it teaches us in relation to the circulation of the blood in the cavity of the heart. One property of the muscular tissue is, that whilst in action the muscle only changes in form, that it retains a stable size, and gains exactly in transverse diameter what it loses in length. It therefore becomes easy to obtain by means of the myograph the changes of diameter of the muscles, and to thus analyse certain disturbances of the muscular function, convulsions, tetanus, tremblings, etc. M. Marey hoped one day to find graphic characters of the muscular action in acute diseases leading to degeneration of the muscles. The myograph also gave information on the function of the motor nerves. In relation to the circulation, the myograph had not only confirmed previously acquired notions, but allowed the analysis of arterial and cardiac disturbances, and in certain circumstances in a more precise manner than auscultation and percussion in conjunction.—M. Colin did not share M. Marey's enthusiasm for the graphic method, and maintained that it had not yet led to any discovery. It was a method for the laboratory and not for the physician, difficult to manage and also capable of misleading. Thus M. Marey had been led by the myograph to admit that tonic and clonic contractions are of the same nature, that in the one the muscular spasms are separated by long intervals, and that in the others they are brought so near together as to become confounded and to appear continuous. M. Colin protested against such an opinion, and believed that convulsion cannot be assimilated to contraction. He also dissented from M. Marey with regard to many other points.

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#### IMPERIAL ROYAL MEDICAL SOCIETY OF VIENNA.

May 31. *Development and Malformations of the Brain*.—Dr. Heschl showed a series of preparations of the brain, in several groups. The first group consisted of specimens of the brain from the fourth to the seventh month of intra-uterine life, and was intended to show the development of the surface of the brain, of the convolutions, and of the great fissure. In a brain between the third and fourth months, the surface is quite smooth; there was no trace of convolutions; the future Sylvian fissure is only indicated by a lateral depression. *Per parenthesin*, Dr. Heschl remarked that the cerebellum is often backward in development, without any disadvantage to the individual. Last year, he examined the brain of a female thief, in which one half of the cerebellum was entirely absent. In the fifth month of embryonic life, three sulci are formed on the upper surface of the brain, by an arrest of the development of the white substance at these parts. In some cases, it happens that the Sylvian fissure does not exist as such, but is completely filled by convolutions of the island of Reil growing from the upper surface of the brain. Dr. Heschl also showed a microcephalic brain, *i.e.*, one arrested in its development at about the sixth month; also preparations of microgyria or polygyria, in which the white sub-

stance is developed in two small masses, and there is not a connected layer of white substance as in the normal brain, while the number of convolutions is remarkably increased. A peculiar defect in the brain is that in which, from some parts of the cerebral surface, a canal leads directly into the lateral ventricle. These losses of substance are sometimes very considerable, and were classed by Heschl under the name of porencephalia. In many cases, the hole is filled at the upper surface with a flocculent tissue. Dr. Heschl attributed the occurrence of these openings to foetal encephalitis; the cells becoming infiltrated and undergoing fatty degeneration. The openings are most probably formed at an early period of foetal life. Dr. Heschl also showed specimens, in which the fissure dividing the brain into two hemispheres was quite absent.

## REVIEWS.

*The Endemic Tetanus of Eastern Long Island.* By GEORGE M. BEARD, M.D. New York, 1878.

In this pamphlet, Dr. Beard attempts to account for some very remarkable facts not hitherto satisfactorily explained. 1. For many years tetanus, both idiopathic and traumatic, has prevailed in Suffolk County, Long Island, New York; 2. This does not exist in all sections of the county; 3. It is becoming less and less frequent every year. These facts are based upon the observations of many able medical men, which Dr. Beard has carefully collected and sifted, comparing them with any official statistics available.

His conclusions lead him to believe that tetanus in that portion of Suffolk County alluded to, is about 150 times as frequent as in New York; at all events, statistics show that the proportion of deaths from tetanus in New York and Brooklyn is about 1 in 75,000 of the population. About the same proportion exists in New Haven. In Suffolk County, on the other hand, with a population of from 45,000 to 50,000, there were about 25 deaths annually from this cause 20 years ago. Remembering, then, that the disease is only found in the southern portions of the county, we can understand the high relative proportions mentioned.

An examination of the superficial geology of the county shows it to consist of alternating strips of various kinds, from poor sandy soil to fertile mould. The county in its southern and middle portions is low and flat, in the northern portions undulating somewhat. The southern and central portions are exposed to the ocean air, to the salt air from bays, and the mingling of fresh and salt water.

The disease is most frequent in the months of July, August, and September, and more so among males than females. Moist situations and heavy rains seem to excite the malady.

It has been supposed by some that the disease was in some way connected with the use of fish for manuring the land. In some parts of Long Island, large quantities of "bony fish" are caught and thrown on the fields to rot, causing a horribly offensive odour. This view, however, Dr. Beard feels himself compelled to reject on mature consideration. Also the theory that it depends upon the geological structure of the country, he considers untenable on careful examination.

Compelled to abandon these theories of the causation of tetanus, the first of which he was

inclined to adopt at the outset of his inquiries, he believes himself driven "negatively by exclusion to one which positively harmonises all the phenomena, near and remote, which bear on the subject", namely, "dampness of the ocean air combined with local dampness of the soil". This theory is in harmony with what is and has been observed of the causation of individual cases of tetanus, both here and everywhere else where the disease has been studied. "Wet and cold", he goes on to say, "especially following exposure to heat, is everywhere in all countries, and in all ages, the apparent exciting cause of tetanus, endemic, epidemic, and sporadic. It is in hot, low and damp regions, that tetanus most abounds, and, in temperate regions, it is most common in the warm months."

In support of this statement he quotes the experience of Larrey in the wars of Egypt and Germany, of François in the American Civil War, of surgeons engaged after the battles of Bautzen and Dresden, of Baudens while in Africa, and of Dr. Kane in his North Pole expedition.

The very large number of cases of tetanus occurring in Bombay he accounts for on the same theory. "The conditions requisite for the production of tetanus in a hot and moist climate, contiguity to the sea, local dampness of soil, and great carelessness in regard to exposure to wounds on the part of the people, all appear in that country in full force."

Dr. Beard introduces here a very interesting table showing, as nearly as it is possible to gather from available statistics, the proportion of deaths from tetanus to the aggregate of deaths from all causes, in nineteen or twenty important localities scattered over the globe.

The fact that not only in Long Island, but also in New York and Brooklyn, fatal tetanus is decreasing in frequency, is a very interesting one. To such an extent is this the case in New York that, prior to 1834, there was one case registered for every 748 deaths from other causes in that city; while, in 1873, the proportion was only one to 3,635. The author accounts for this as follows in regard to Long Island.

"The decline in the endemic tetanus of Long Island is, without question, due in the main to the greater care on the part of the people, and greater skill in treating wounds on the part of the physicians. During the past fifteen or twenty years, the inhabitants of the island have gone barefoot less than formerly, have dressed more comfortably, and, when wounded in any way, have taken care to avoid exposure to wet and cold. Physicians give much more attention to the early treatment of wounds, and the people themselves are more careful in this respect than formerly."

We do not think that Dr. Beard advances the study of the pathology of tetanus by expressing the conclusion that he has arrived at, that it is a "cold in the spinal cord". What this means, moreover, he does not seek to explain. But the practical deductions which he draws from the accounts published of different modes of treatment and their success, may prove very useful in the future to surgeons in this country, especially as we can congratulate ourselves upon having a rarer opportunity of studying the disease than those in other parts of the world.

He says, "If in the light of all the facts on the subject that I have been able to obtain, I were called upon to treat a case of tetanus, I would use—

"1. Calabar bean in form of fluid extract, English preparation, in doses of from two to four drops every



half hour, or less frequently, until decided effects on the pupil were produced and maintained. Probably many of the failures with this remedy have been due to poor preparations.

"2. In connection with the internal use of Calabar bean and simultaneously, beginning as early as possible, I would use ice to the spine, either in bladders, as suggested by Dr. Todd, and carried out with great success by Dr. Carpenter, or by Dr. Chapman's ice-bags. This treatment—both ice and Calabar bean to the spine—should be kept up persistently, with occasional intervals, according to the behaviour of the case, for several days if necessary.

"If this treatment after fair and full trial should promise to fail, I would substitute hydrate of chloral or Indian hemp for the Calabar bean, keeping up, however, the ice treatment.

"The treatment of ice to the spine, I may remark, is in no way inconsistent with any form of internal medication. Spasms may be reduced by chloroform inhalations.

"Wounds may be successfully treated by two directly opposite methods: 1. Irritants that cause suppuration; 2. Anodynes to allay inflammation. Practically, it seems to be proved by the physicians in and near Cutchogue, that when wounds are treated by applications of turpentine down to the very bottom, tetanus does not occur. Admitting that only by a coincidence has that region been free from tetanus during this past five years, the point is clearly established that this method of treatment is a safe experiment. In a region where tetanus formerly abounded scarcely a case has appeared since this method has been used. If I were practising medicine in that section I should certainly treat wounds by this method.

"For those who prefer the anodyne treatment, the method of Dr. Carpenter is probably as good as any—free incision, and the application of cotton batting, saturated with laudanum.

"Hygienically, warm clothing, avoidance of exposure to wet and cold, and night air, are required of those wounded in any way."

The detailed treatment of six cases of tetanus concludes this interesting pamphlet.

ARTHUR E. BARKER.

*Thyrotomy for the Removal of Laryngeal Growths. (Die Laryngotomie zur Entfernung endolaryngealer Neubildungen).* By Dr. PAUL BRUNS, Extraordinary Professor of Surgery at Tübingen. Berlin: Hirschwald. 1878.

The importance of this admirable little book will prove very great, especially in this country, where the value of endolaryngeal operations for the removal of growths is by no means as generally acknowledged as it deserves. It shows convincingly first, that thyrotomy can, in no respect whatever, be placed on a par with the endolaryngeal method; secondly, that all the vague reproaches made against the latter (danger of its performance, doubtful results, possibility of hurting healthy tissue, likelihood of reappearance of the growth, degeneration of a benign growth into a malignant, etc.), are either greatly exaggerated or wholly unjustified. Dr. Bruns has chosen the statistical method, in order to decide to which of the two plans of operating the palm is to be given, and his results are incontestable, because based upon all the cases of each method on record. Further, he does not simply compare the results obtained, but he has most carefully made

selections and subdivisions according to the nature of the growth (whether papillomatous, fibrous, adenomatous, sarcomatous, or carcinomatous), and the age of the patients (whether adults or children). All the cases in every table are selected with the greatest impartiality. The original material is thus very large, and consists of more than 100 thyrotomies, and more than 1,100 endolaryngeal operations. Finally, the following very interesting results have been obtained. (Most of them are quoted in Bruns's own words.)

1. Thyrotomy is not dangerous to life, nor difficult to perform, but in itself is very dangerous to the vocal function. The alleged advantages as to the facility of its performance, the guarantee of complete extirpation, and the protection against recurrence, do not exist in reality.

2. Thyrotomy can, therefore, in no way be placed on a par with the endolaryngeal method. It is to be performed only, after an experienced laryngoscopist has unsuccessfully attempted the endolaryngeal removal.

3. Even in this case, if possible, thyrotomy should not be performed, but partial laryngotomy, *i.e.*, division of the crico-thyroid ligament, and, if necessary, of the cricoid cartilage and the superior tracheal rings; inasmuch as everything depends, functionally, on the question whether the operation can be performed without the division of the thyroid cartilage, *i.e.*, the anterior commissure of the vocal cords.

4. In urgent cases, in which tracheotomy has to be performed for the relief of dyspnoea, thyrotomy ought not to be combined with this operation, nor ought it to follow immediately; but, after tracheotomy, the endolaryngeal method ought to be tried. In those cases only, in which there is an indication for "partial" laryngotomy, the tracheal incision might be prolonged through the cricoid cartilage.

5. In cases of carcinoma, either method is equally inadvisable.

6. If, after endolaryngeal removal of papillomata, recurrences take place, the same method ought to be tried over and over again, as there are many cases on record showing that, after frequently repeated operations, complete cure was finally obtained.

7. Extralaryngeal and intralaryngeal treatment are not very successful in removing endolaryngeal papillomata in children. The endolaryngeal method, however, ought to be tried in every instance, as there are several cases on record in which the operation was successfully performed on children six months old. If it be unsuccessful on account of the excitability of the child, tracheotomy (in cases of emergency) ought to be performed, and the practitioner should then wait until the endolaryngeal method might be more successfully carried out, or, in infants, thyrotomy might be performed.

These are the very important conclusions to be drawn from the perusal of Dr. Bruns's book. Space does not allow us to communicate here more than the results of his work. FELIX SEMON, M.D.

*Goitre-Death and Radical Cure of Goitres. (Der Kropfstod und die Radicalcur der Kröpfe.)* By Dr. EDMUND ROSE, Ordinary Professor of Surgery at Zürich. Berlin: Hirschwald. 1878.

Dr. Rose discusses in his pamphlet at some length the question of sudden death in consequence of goitre. He first refutes the present theories on the reasons of this by no means unfrequent occurrence,

viz., liability of the goitre to cerebral influences, venous stasis, substernal goitre, paralysis of the recurrent nerve or of the posterior crico-arytenoid muscles, pressure of the goitre on the trachea, etc. He shows that the patient might die suddenly, none of these supposed causes of death being confirmed by the *post mortem* examination; and that, on the other hand, one or several of these hypothetical dangers are often present for years without any inconvenience to the patient.

The real cause of the sudden death is, according to Rose, a softening, fatty degeneration, and atrophy of the tracheal cartilages, which the latter undergo in consequence of the permanent pressure of the goitre on themselves. This softening may remain completely latent for years—1. If the tracheo-malacia have been developed very slowly; 2. If the patient have instinctively accustomed himself to keep his head very steadily in such positions in which no crack or tilting over of the softened windpipe is to be feared; 3. If the goitre itself be hard enough to preserve the trachea from this danger. On the other hand, this latent peril might appear suddenly—1. If the pressure become quickly, or even instantaneously, much augmented (*e.g.*, in carcinomatous degeneration of the goitre, or when external pressure is made); 2. If the accustomed steady position of the head be suddenly overthrown by force, or by a fainting fit, or by the administration of some anæsthetic; 3. (This will be very important in future.) If by artificial means, especially by injections of iodine into the parenchyma of the goitre, the latter have been caused to become smaller. Iodine injections reduce the goitre in size, but render the remainder much harder by the new formation of fibrous tissue. Thus the kind of surgical splint, which the goitre might have previously formed for the softened part of the windpipe, might be reduced and become too short for the protection of the softened part, while the pressure at the same might be even increased. The danger of a sudden cracking or tilting over of the trachea is, after this, of course still greater, if the goitre is radically extirpated. In this way some cases find their explanation, in which, some time after a very successful extirpation, the patients died quite suddenly. The want of success which generally attends the attempts of restoring the patient to life in such instances must be explained by the fatty degeneration which the heart almost invariably undergoes in these cases, in consequence of the difficulty of respiration.

The only therapeutical measure which is, according to Rose, likely to be successful, is, splitting up of the enlarged gland from below upwards, in that line in which the two lobes have become pressed together, followed by subtruncus tracheotomy, and subsequent total extirpation of the goitre. He rejects tracheotomy above or below the goitre as useless, even should it be possible to perform it. The gland ought to be divided precisely in the line just mentioned (which is, however, not always to be found in the median line of the goitre), because here the danger of hæmorrhage is least to be feared; tracheotomy ought to be performed at the softest and narrowest point of the trachea. This is, according to Rose, almost invariably its uppermost part. After that, the goitre ought to be extirpated (a very minute description of this operation is given in the pamphlet), and then a long and wide tracheotomy-tube should be worn as a kind of orthopædic sustentaculum, until the softened part of the windpipe has become quite hard again. In conclusion, illustrative cases

of collapse, death from goitre, and total extirpation of goitres, are given. FELIX SEMON, M.D.

*Du Bégaiement et de son Traitement Physiologique.*  
Par le Dr. JULES GODARD. Paris: J. B. Baillière et fils. 1877.

The object of this *brochure* is to advocate the method of treatment for stammering, which was introduced some years ago by M. Chervin. This method, in common with most others in vogue at the present day, is founded upon the rational basis of educating *en masse* the whole of the complicated mechanism involved in the production of speech, instead of attacking simply this or that organ which may at first sight appear to be the one on which the defect mainly depends.

Dr. Godard begins by giving an account of the physiology of stammering, and of the different methods which, in times past, have been devised for its cure. He quotes with approval the definition of stammering proposed by M. Moutard-Martin, viz., that it consists of "an intermittent chorea of the apparatus concerned in phonation, the respiratory act being included". Indeed, it is to the respiratory apparatus that M. Moutard-Martin attributes the most prominent rôle in the production of stammering, for he says, "One fact will be evident to all who carefully study a number of stammerers, and this is the irregularity, the uncertainty of respiration during the act of phonation, sometimes of inspiration, but more often of expiration. The inspiration may be incomplete, or it may be excessive, perhaps almost convulsive. The expiration may be jerky, or too quick, or too slow. Some stammerers try to speak during inspiration, or they cut their words short by an inspiration, during which they try to go on speaking. We may say, then, that the expiratory trouble is "a constant fact in stammering". Upon this statement of M. Moutard-Martin is based the classification adopted by Dr. Godard into (1) inspiratory stammering, (2) expiratory stammering, (3) stammering associated with both acts; and each of these groups is further subdivided according as it is or is not associated with irregular movement of the features, lips, or tongue. We cannot look upon this as a scientific classification of stammering; for though it is beyond dispute that in most cases of this affection the respiratory rhythm is more or less interfered with, yet we feel convinced that, in a very large number of instances, the respiratory trouble is only secondary to inco-ordinate action of the muscles involved in articulation, and it is not in accordance with scientific accuracy to base the main classification of the disease upon a point of such minor importance as we believe this to be. The bellows-function of the lungs is by far the simplest of all the muscular actions concerned in speech; and if no more complex co-ordinations were required than this, we should probably have no stammering. It is, however, in the extremely delicate and highly co-ordinated movements involved in the production of articulate sounds, that we must seek to find the explanation for the majority of cases of this abnormal condition. We believe that a careful analysis of the phenomena presented by stammering would show that it is analogous to some of the conditions to which the generic term "writer's cramp" has been applied rather than to chorea, and we have little doubt that, by a careful study of each case, it would be possible to say which was the primary and essential modification, and which were the secondary



changes depending simply upon the primary. By a comparison of a large number of carefully observed cases, we should at last obtain the data for a scientific classification, and in such a classification we believe the influence of the respiration would have only a very subordinate position.

For practical purposes, however, it appears to be of small moment what classification is made of the different varieties of stammering, for all kinds seem to be amenable to the same treatment, which, as we before stated, is based upon the education of all the parts concerned in the production of speech. Before describing the method introduced by M. Chervin, Dr. Godard gives a summary of the various kinds of treatment which have been adopted in bygone times, and, amongst others, he refers to the operative measures advocated by surgeons in different countries. These have been truly formidable, and, looked at from our present point of view, they can only be considered as utterly unjustifiable; and it is with surprise, therefore, that we learn that operative interference is still regarded with favour by some distinguished surgeons in France. Dieffenbach of Berlin appears to have been the first to introduce this mode of treatment. He operated upon nineteen different patients, the kind of operation varying in different cases. In some, he simply cut through the root of the tongue; in others, he cut through all the muscles, leaving the mucous membrane intact; whilst in a third set of cases, he not only cut through the root of the tongue, but took out a triangular piece, involving the whole length and thickness of the organ. Dieffenbach, however, recognised fully the dangers inseparable from his operations, and recommended that they should not be generally undertaken. Velpeau modified these operations by cutting only those muscles which appeared to be most affected with spasm, and further modifications have been made by subsequent surgeons; but whatever the operation, and however it may have appeared for a time to improve the patient's condition, in no case has this improvement been permanent. The results of all the operations have been collected by M. Guillaume in his article on Stammering in the *Dictionnaire des Sciences Médicales*, from which it appears that in no single case has the improvement lasted more than six months; proving incontestably that stammering must not be looked upon as due to local defect of the organs of speech, but rather to some abnormal condition of the nerve-centres governing the act of articulation. It is to the rectification of this condition that M. Chervin has devoted his attention. The main principle of his treatment lies in the daily and methodical exercise of the muscles concerned in speech under the direct guidance of a master, and, apart from this exercise, in the maintenance of absolute silence, so that the old habits may be effectually broken. Imitation rather than direct precept is relied upon for the production of the new co-ordinations, and a very short time only is necessary to produce in most instances a notable change in the patient's speech. The whole cure is said to be effected in about three weeks, and, judging by the cases reported, M. Chervin appears to have been remarkably successful in his treatment. He himself does not claim to have introduced any very new idea into the treatment of stammerers; but, according to Dr. Godard, he attributes his success to a rigid adherence to the rule which enjoins silence except during the lesson with the master, and

to a careful selection of the exercises most adapted for each individual case.

We think that Dr. Godard has acted very wisely in bringing the method of M. Chervin more prominently into public notice; and we trust that the adoption of so simple and practicable a course of treatment will be the means of bringing relief to a large number of persons who suffer from a defect so distressing, both for themselves and for those around them.

W. A. STURGE, M.D.

*The Journal of Physiology.* Edited by MICHAEL FOSTER, M.D., with the co-operation of Professors GAMGEE, RUTHERFORD, and BURDON SANDERSON. Bowditch, Martin, and Wood. Vol. I, Nos. 2 and 3, 1878.

These two numbers published together form the second part of this newly-established journal. The papers contained are fully up to the high standard of excellence which the editors have proposed to themselves. They are the following.

Professor Kuehne and Dr. Ayres contribute a paper on the stable colours of the retina. This paper appears simultaneously in the *Untersuchungen des Physiol. Institut der Universität Heidelberg*, Band i, Heft 4. The authors have distinguished and isolated four colours in the retinas of fowls and frogs. Three of these colours they have named chlorophane, xanthrophane, and rhodophane, corresponding to a yellowish green, an orange, and a fine red or purple. They were obtained by treatment of the eyes of hens. The fourth colouring matter is lipochrome, a yellow obtained from the retinal epithelium of frogs' eyes. An additional note is devoted to the ordinary black pigment of the eye, which Professor Kuehne finds to be not perfectly stable under the action of light.

Professor Martin contributes an exceedingly interesting paper upon the respiration in the frog. Beginning with a brief account of the literature of the subject, he goes on to show that two kinds of movements enter into the respiration, the "throat" movements and the flank respirations. The former are unaccompanied by closure of the nares, or by any change in the volume of air in the lungs, but simply renew the air in the mouth; whilst the "flank" respirations are accompanied by change of the air in the lungs. The nervous mechanism is next studied, and the conclusion arrived at is that the centre which innervates the elevators of the hyoid is an inspiratory centre, whilst the less irritable or less readily dischargeable expiratory centre acts through the depressors of the hyoidean apparatus. The effects of stimulation of the optic lobes or corpora bigemina with small crystals of common salt is next investigated, and it is found that the resistance to the discharge of the inspiratory centre is diminished, so that a condition of tetanic inspiration is caused for a time; whilst the resistance to the discharge of the inspiratory centre is increased, leading to rare expirations, which are of great violence when they occur. The experiments appear to have been made with the greatest care. The result obtained is explained provisionally by asserting that irritation of the optic lobes diminishes the irritability of the inspiratory centre, and increases that of the expiratory. The irritation of the optic lobes is, for reasons given, supposed to be in the way of stimulation rather than of paralysis.

Mr. North contributes a paper on the effects of starvation with and without severe labour on the

elimination of urea from the body. The experiments were made upon himself. The results corroborate the assertions—(1) That severe exercise increases to a slight degree the elimination of urea; (2) That the quantity of urea passed during any period is largely dependent on the nitrogenous constitution of the body for the time being.

Mr. Wood Field, in studying the sweat-centres and the effect of muscarin and atropin upon them, confirms the statement that, like other glands, the sweat-glands have secretory nerves. He also shows that deficient aeration of the blood calls into activity the sweat-centres, and that muscarin excites whilst atropin arrests the sweat-glands by peripheral action.

The present number of the journal concludes with an analysis by Dr. Burdon Sanderson of Hermann's recent researches on the electro-motive properties of muscle, in which the currents of resting muscles are considered in regard to the development of the muscle current; the conditions which affect the permanence of the electromotive activity of an injured surface; the influence of temperature and the currents of entire muscles. The action currents, that is to say, the currents by which the electro-motive forces coming into operation at the moment, and at the seat of excitation, manifest themselves, are next considered, the chief points being—the wave-like propagation of the negative variation; the phasic and tetanic action-currents; and the iso-electrical condition of totally tetanised muscles. The list of physiological books and papers is exceedingly full, and promises to be of the utmost use.

D'ARCY POWER.

*On Hare-lip and Cleft Palate.* By FRANCIS MASON, F.R.C.S., Surgeon and Lecturer on Anatomy at St. Thomas's Hospital. London: J. and A. Churchill. 1877.

One cannot but admire the pains which Mr. Mason has taken to make this work as complete a review as possible of the subjects indicated in the title. The writings of surgeons from numerous schools, both British and Foreign, are in the most impartial spirit ransacked for matter bearing on the question, with the result of producing a very valuable essay. Moreover, a considerable personal experience enables Mr. Mason to speak authoritatively on many points of practical interest. The description and comparison of various modes of operating on hare-lip, with which Part i closes, are especially interesting, and the surgeon is certainly offered a very large choice.

In Part ii we have the question of operative procedures for the closure of cleft palate placed before us, the first point of interest noted being the age at which it is proper to interfere for the purpose. On this point there appears to be the widest difference of opinion, the author himself choosing the fifth or sixth year. Then, briefly noticing the various mechanical contrivances for closing these congenital apertures, the author passes on to describe the different operations that have been designed for the same end. These are dealt with very carefully and in a liberal spirit wherever the writer reviews the methods of others in the light of his own experience.

As a literary production, the work has some slight blemishes, notably a certain abruptness, incidental to almost all works of compilation, the want of careful paragraphing being chiefly what is felt. This

is not apparent where the author is solely expressing his own ideas, where he leaves little to be desired. The text is elucidated by a number of excellent drawings and diagrams. ARTHUR E. BARKER.

*Papers on the Plant Gynocardia Odorata, from which the Chaulmoogra oil is obtained.* Compiled by RICHARD C. LEPAGE. London: Trübner & Co. 1878.

Chaulmoogra oil is derived from the seeds of the plant *Gynocardia Odorata*. It has been used for centuries by the Fakirs of India as a cure for skin-diseases and leprosy. About thirty years ago it attracted the notice of Dr. Mouat, of the Bengal Medical Service, who used it with success in various cases. In a case of leprosy with large excavated ulcers it was applied externally, whilst six grains of the seed in the form of a pill were given three times a day. For a fortnight there was no perceptible amendment, but after this the progress of the cure was rapid, the ulcers healed by healthy granulation, and the general health improved. In a case of enlargement and ulceration of the parotid and submaxillary glands, and ulceration of the roof of the mouth, it was also used with success. In this case, twelve grains of the seeds were given three times a day, and the wounds dressed as before. In less than ten days the ulcers began to heal; in eight days more they were so nearly cicatrised, that the man left the hospital and became an out-patient, and in a fortnight more they were completely healed. Two months afterwards he was again seen, when the healing was found to be permanent. Dr. Mouat also used it with apparent benefit in cases of secondary syphilis and syphilitic rheumatism, in mild ichthyosis, scrofulous enlargement of cervical glands, elephantiasis on the face, and leucopathia of ten years' standing.

Dr. Hobson has used Chaulmoogra oil and seeds in cases of leprosy in Canton, for which he gives drachm-doses of the seed coarsely pounded twice a day, and rubs the affected part with the oil. He writes that the treatment must be steadily carried on for some months, with occasional saline aperients. The eruption becomes gradually less red and prominent, whitish scales appear round the margins, and the central parts assume the appearance of healthy skin. He has seen two cases certainly cured and others much benefited by this treatment.

Mr. Richard Jones found that the oil was a specific in consumptive cases, if administered before the disease had made serious inroads into the constitution. He thinks that the curative powers of the oil are most striking in cases of scrofula in children.

The seeds are alterative tonic in moderate, and emetic in large doses. In large quantity it is apt to cause nausea and irritability of the stomach. It would be well carefully to regulate the diet of patients under this treatment, by giving butter and oily foods, and avoiding salt meats, acids, spices, and sweet-meats.

The oil, especially that sold in the native bazaars, is often adulterated with cheaper oils. The pure oil is of a golden sherry colour. By the action of sulphuric acid it is turned first burnt sienna colour, and afterwards rich olive green; and if the oil have not been properly prepared, a tenacious resinous mass is also formed.



*Dental Caries and its Causes: An Investigation into the Influence of Fungi in the Destruction of the Teeth.* By Drs. LEBER and ROTTENSTEIN. Translated by H. CHANDLER, D.M.D. London: Churchill.

This very valuable book, the result of careful researches on caries, has achieved a considerable reputation in France and Germany, and has been honoured by a translation by Dr. Chandler, of Harvard University. It is presented with but few alterations to the English medical public; and it having already been very favourably spoken of by eminent authorities, it is not necessary that we should enter into any long account of it. We need only refer to it as the best existing authority on the scientific investigation of decaying teeth and the study of the means of prevention. The chapter on the means of prevention of caries is brief. It lays down, however, scientifically the desiderata in dentifrice, constructed on scientific principles; and this part of the subject, which has since been practically studied by Dr. Rottenstein, has been further developed by him in the paper on the Principles of Construction of a Scientifically devised Dentifrice, read at the Odontological Society of London, and printed in the *Transactions* of that Society. A great deal of harm might be done, and often is done, by the use of many artificial and unscientifically constructed dental washes and powders which are in vogue, some of which, either by their grittiness or acidity, are productive of positive harm, while others are inactively injurious from their inefficiency. In studying this subject so carefully and scientifically, Dr. Rottenstein has rendered good service, and his labours are likely to prove of much general utility.

*The Whole Meal-Bread Question in a Dietetic and Economic Point of View.* By W. HILL and SON, Bakers to the Queen. 1878.

Messrs. Hill take a genuine interest in their trade as bakers, and this little brochure is an evidence thereof. Brown bread makers are not of yesterday, for they existed in 1464, and were incorporated in 1621. Recently, however, the dietetic value of brown bread has been more generally appreciated, and the value of what is rejected in white bread making been recognised. As a dietary for children, brown bread is specially valuable, as it is also for adults, who are inclined to be constipated. It is palatable and appetising, and with a roll of butter forms a capital breakfast or lunch. Messrs. Hill have devoted great care to the construction of their ovens, which leave nothing to be desired for cleanliness or efficient cooking.

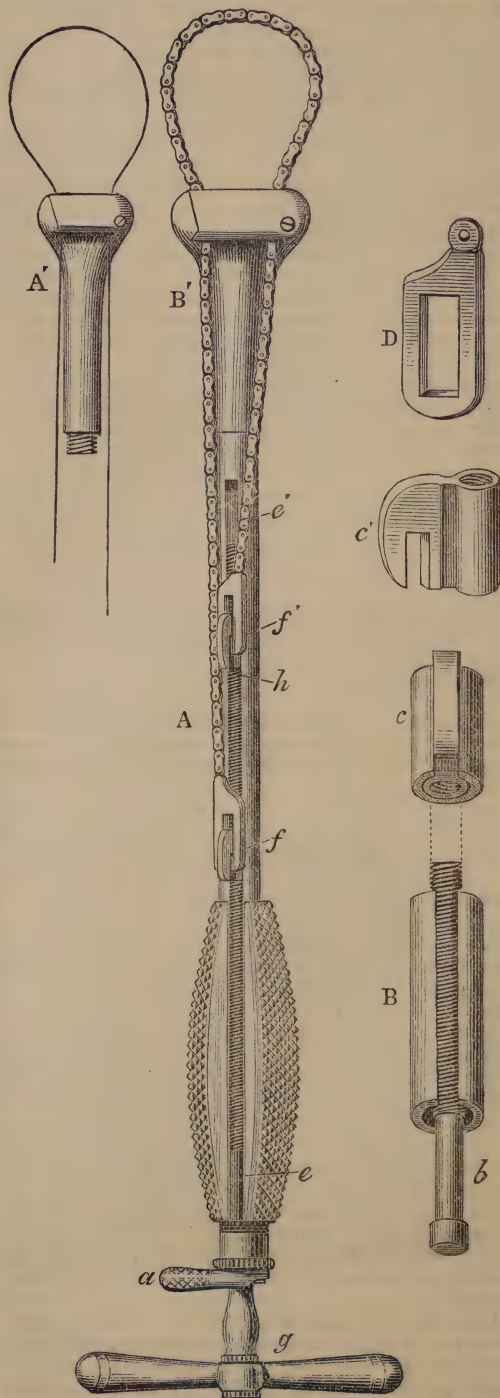
## NEW INVENTIONS.

### AN IMPROVED ÉCRASEUR.

In a paper read before the Dublin Obstetrical Society in March, and published in the *Dublin Journal of Medical Science* for May, Dr. John Denham, jun., describes a new *écraseur*. He says: In order that I may better show what I consider to be the advantages gained in my instrument, I shall point out the defects in the *écraseur* in general use.

Supposing it were necessary to remove a tumour with the *écraseur* larger in circumference at its thick-

est part than the length of the screw of the *écraseur*, necessarily, when the wire or chain is completely worked down to the end of the screw, there is still a piece of tumour to cut through, and no more screw wherewith to work. Now the screw must be relaxed and the wire unfastened from its attachment at the cross bar. This unfastening of the wire, if it be stout, is no easy matter; sometimes the use of a



pliers is necessary. Having then shortened the wire, it must again be fastened to the cross bar, and the operation continued.

The principal defects, in my opinion, are—1. The great difficulty of shortening the wire *in situ*; 2. The delay occasioned; 3. The danger of hæmorrhage from the movements made in relaxing and tightening the wire, which are often very great.

In the accompanying plate the instrument is represented as half size, the minutæ accompanying full size. At each end of the screw *e' e* there is a groove into which the two hooks *f' f* exactly fit. These grooves are simply part of the screw without a thread, as represented in B', *b* being the groove. In order better to make myself understood, I shall go through the *modus operandi* of using this instrument.

Having it adjusted with a chain in the manner here represented, each end of the chain having a steel loop attached (D represents the loop); this can be hooked and unhooked at pleasure, the upper hook *f'* resting in the groove *e'*, the lower hook *f* resting quite close, but on the screw. When the handle *g* is turned, *f* travels down the screw, *f'* remaining motionless in the groove. Having worked *f* down to the end of the screw, until it slips into the groove *e* and remains motionless, then *a* is pulled over, *g* is pushed up into the space left by *a*, then the end of the screw strikes *f'*; on turning the handle *g*, *f'* becomes wormed on to the screw off the groove; *f'* then travels down the groove after *f*, and stops close to *f*. If wire be desired to be used, all that is necessary is to remove B' and substitute A'.

The advantages which I consider this instrument to have are—1. Simplicity in construction and application; 2. Having two separate instruments combined in one, that is, being able to use both wire and chain on the one instrument; 3. The ease with which it can be worked; 4. The rapidity of its action.

Finally, I may state that this instrument is capable of removing a tumour 14 inches in circumference without making any change in arrangement. It was made for me by John Whyte of Dublin, most satisfactorily.

#### BUCELLAS HOCK.

Under this name, the eminent firm of Sandeman and Co. of St. Swithin's Lane are introducing to notice a wine which their Lisbon House, Messrs. Sandeman Brothers, have prepared to meet the requirements of consumers in the United Kingdom.

It is a pure natural wine made in the district of Bucellas near Lisbon, and contains something under 26 per cent. of proof spirit. It is consumed to a considerable extent in Lisbon, and is gaining there a reputation for wholesomeness. In combination with aerated waters, it is peculiarly valuable as a summer beverage. Its cost is moderate, and wine merchants through whom it could be obtained in this country could sell it at a fair profit at 24s. per dozen. It has the advantage of keeping perfectly well after being uncorked, and thus holds a place which none of the hocks of Germany, or of the Bordeaux wines, are calculated to fill. It is a wine which, by its purity of production, its pleasant flavour, and full ethereal quality, is likely to meet with very general favour. That which has given to sherry its firm hold on public estimation, and its steadily growing consumption, is the fact that, added

to its excellence as a wine, it does not spoil after the bottle has been opened. This valuable and economical property the Bucellas hock also possesses. Combined with its other merits this has already obtained for it immediate popularity, and will ensure for it a large amount of permanent favour.

#### MISCELLANY.

PROFESSOR ROKITANSKY.—Dr. Karl Rokitsansky, for many years the eminent Professor of Pathology in the University of Vienna, died on July 23, in the seventy-fifth year of his age. He was born at Königgrätz, in Bohemia, and studied medicine in Prague and Vienna, graduating as Doctor of Medicine in 1828. He was at once appointed assistant to the then professor of pathological anatomy in Vienna, Dr. Johann Wagner; and, at Wagner's death in 1834, became extraordinary professor. Ten years later—after the appearance of his celebrated *Handbook of Pathological Anatomy*—he was appointed ordinary professor. Besides his great work on pathological anatomy, he was the author of many essays and papers, principally on pathological subjects. He received numerous honorary distinctions from the Austrian Government and various German and foreign universities and societies. In addition to his professorship, he held, since 1847, the office of State anatomist and prosector, in which capacity he performed several thousands of *post mortem* examinations. His funeral was attended by the Archdukes Rainer and Carl Ludwig, and by representatives of the medical societies in Vienna, and of the Austrian universities, as well as by the Government ministers and the municipal authorities. In recognition of his eminent services to science and to the State, the Austrian Government has made a special grant to his widow, in addition to the pension to which she is entitled.

MR. RICHARD DAVY has been elected to the Chair of Orthopædic Surgery at the Westminster Hospital; and will see patients every Friday, without any letters of recommendation, at 3 p.m.

THE TELEPHONE.—In delivering the Rede Lecture in the Cambridge Senate House on May 24, Professor Clark Maxwell selected as his subject "The Telephone." He described the telephone from a physical point of view, and showed that, in order to transmit speech by electricity, it was necessary to obtain electric currents varying in a continuous manner with every gradation and inflexion of the original sound waves. The lecturer gave examples of the transmission of musical notes by intermittent currents, in which this condition of continuity cannot be satisfied. Mr. Gower's telephone-harp was played in the Geological Museum, and the music transmitted to three large telephones in the senate house—one of them being the original instrument, belonging to Professor Graham Bell. The first tune selected was the "March of the Men of Harlech", and subsequently other tunes were played, the experiments being eminently successful. It was explained that practically there was no difficulty as to distance, for recently Mr. Gower's harp was played at Stratford-on-Avon and the tunes transmitted to the Gaiety Theatre in London. Professor Maxwell then made use of Faraday's method of lines of magnetic force, to explain the undulatory currents on Bell's telephone, and stated that Professor Tait had recently measured the strength of these currents, and found that a current about a thousand million times less than that used in ordinary telegraphs would, if renewed five hundred times per second, produce an audible sound on the telephone. In Bell's telephone these currents derive their energy entirely from the voice of the speaker, and therefore the sound which they produce is necessarily weaker than the original sound. This limitation did not exist when the current was supplied by a battery, and when the effect of the voice of the speaker was merely to modulate



the intensity of the current. This was the case in Professor Hughes's microphone, in which the sound vibrations produced a varying pressure between two pieces of carbon, which form part of the line, and thus introduced a varying resistance into the electric circuit. The variation of the current is proportional to the strength of the battery, and therefore the sound produced by the receiver may be much more powerful than the original sound received by the microphone. Professor Maxwell finished an interesting lecture by pointing out the scientific importance of recent advances in the physiology of the senses.

**THE BRAIN AND THE PHONOGRAPH.**—Dr. C. W. Siemens, at a recent meeting of the Society of Telegraph Engineers, in speaking of the novel fields of speculation and investigation opened by the invention of the telephone, microphone, and phonograph, himself threw out the novel hint that the grey matter of the brain may be a species of phonograph foil, on which are recorded all the impressions of our senses, thus serving as a store-house of experience.

**PELLAGRA AND THE ITALIAN PEASANTRY AT ROME.**—Much attention has been drawn of late to the pellagra, the veritable scourge of the northern Italian peasantry. A heartrending picture of this evil and of the havoc it is making is contained in a report made on this subject by the Mantuan Provincial Commission. The pellagra generally makes its first appearance in its victims with the increasing heat of the vernal sun. The first symptom is an efflorescence of the skin on the nape of the neck, the part of the chest laid bare by the flap of the shirt, and the backs of the hands and feet. As the disease progresses, these parts become inflamed, sometimes even blistered and chapped. The mucous membrane of the mouth, lips, and jaws next becomes similarly affected, and an exhaustive diarrhoea robs the patient of his vital forces. Day by day his strength declines, till his legs deny him their support. His skin becomes of an earthy hue, and hangs in loose folds about his bones; his muscles shrink; his whole body is emaciated, unless, indeed, it has become swollen and flabby through the effect of humours impregnating the subcutaneous tissue. Pain in the head, spine, abdomen, and thighs accompanies these ravages, along with a creeping sensation at the extremities, and an internal trembling and burning. Eye and ear begin to fail, the action of the heart is greatly enfeebled, and leaden-hued spots on the skin bear witness to the half interrupted flow of the blood through the veins. The patient becomes a veritable picture of "life imprisoned in a body dead". Not unfrequently lunacy comes to his relief, and the glow of his treacherous fancy exalts his worse than beggarly condition above that of a king; on the verge of the grave he is loquacious and gay. Often, however, the decay of reason shows itself under a different form. The sufferer falls into a state of deep melancholy and stupefaction, broken only by fits of a delirious dread of persecution and paroxysms of despair. Or, again, it takes the form of raving madness, driving him to acts of incendiarism, murder, and suicide. The course of the pellagra is usually slow. Its attacks, which are most frequent in the spring and summer, last several months at a time. Unless other complications arise, dysentery puts an end to the sufferer's miseries. This disease, we are informed, first made its appearance in such proportions as to attract the notice of the medical profession, in an epoch anterior to 1735 in Spain, to 1740 in Italy, to 1818 in France, to 1829 in Roumania. In these countries it prevails at present throughout a zone comprised between the 42nd and 46th degrees of latitude, extending in France, according to recent observations, as far as the 49th degree in the Department of the Seine. These territories, separated from one another by the Pyrenees, the Alps, and the sea, comprise every variety of climate, and are inhabited by peoples differing from each other in race and habits of life. The one feature which appears common to them all is the cultivation of maize on a large scale, and the circumstance that this grain has become the exclusive or staple article of food of that class of

inhabitants among whom the pellagra finds its victims. "It is notable", the report further remarks, "that maize was introduced successively into Spain, Italy, France, and Roumania some generations before the above-quoted epochs". The report likewise contains a minute and interesting disquisition on the nutritive qualities of maize, from which it would appear that the average amount eaten daily by the peasant contains less than a third of the asotised nutritive substances required to restore his frame, whilst the non-asotised amount to half as much again as is necessary. It may be asked whether the Mantuan peasant does not supplement this unsubstantial fare with something more solid. The following quotation from a report received by the Commission may serve as a reply. "The settled peasant, as well as the day-labourer, live almost exclusively on polenta (maize porridge); but the former now and then substitutes this with bread, especially at the time of harvest. Occasionally bean-soup gives variety to his fare; more rarely he manages to add to his rude condiment of lard or bad oil some pork sausage roughly prepared. Of late his diet has grown still more frugal, because, impoverished by the grist-tax, he has been obliged wholly, or in part, to sell his pig. Far sadder is the condition of the day-labourer, who, deprived of the wine which is doled out to the regularly settled peasant, is forced to do without the necessary quantity of salt. Sumptuous is his repast when he can procure some dry salt fish or a little ricotta (goat's milk cream)." The remedies against the pellagra, recommended by the Provincial Commission, refer principally to the establishment of rural places of refuge for pellagra sufferers from the first appearance of the fell disease; and to the raising, by means of popular banks, of the financial condition of the peasantry.

**JUMPING FRENCHMEN.**—At the recent Neurological Congress at New York, Dr. Beard remarked that he was in the midst of an investigation with reference to automatism of the involuntary life; and for the reliability of the phenomena of which he gave an account he was willing to hold himself personally responsible. There were in the northern part of Maine, among the lumbermen, a large number of Canadian Frenchmen who were called the jumpers, or Jumping Frenchmen of Moosehead Lake, from the habit which they had, apparently hereditary, of jumping or striking upon any sudden excitation. For example, if one of the jumpers was told he might jump a number of feet, he was not able to resist the order, even though he was jumping into danger, as into a pond. Sometimes severe accidents had occurred in that way. If a number of them were in a room smoking, and a person suddenly entered and told them to throw away their pipes, they threw them away without reference to risk of breaking them. If, when walking the street, one of the jumpers was told to strike a third party, he was unable to resist, and would strike with whatever he had in his hand, and would strike his best friend, even though death might be the result. The men seemed to be entirely deficient in inhibitory power under sudden excitation. They acted much as though mesmerised, or as entranced persons acted when under the control of the operator. They could not usually speak the English language, but when suddenly addressed in English, they automatically replied in English instantly. The automatism was a very great inconvenience to the men, but they were entirely unable to control themselves. It was not an epidemic, but was a fixed state or habit affecting a large number of those people life-long, and running in families.

**THE MANNA OF SCRIPTURE.**—Among the Algerian products exhibited in the French exhibition is a very singular one, which is interesting as being supposed by some to be the manna of Scripture, but which is identified by the editor of the *Pharmaceutical Journal* as the curious curled-up fronds of an edible lichen, *Lecanora esculenta*. This lichen is said to be blown about into heaps by the winds in Algeria (as well as in Armenia), and the natives are said to grind it up with corn in times of scarcity. It cannot, however, be very nourishing, since 66 per cent. of the lichen consists of oxalate of lime.

# The London Medical Record.

## MEDICAL QUALIFICATIONS IN GREAT BRITAIN AND IRELAND.

THE number of examining bodies in the United Kingdom, which grant degrees and diplomas capable of registration under the Medical Act of 1858 is nineteen; and the registrable qualifications obtainable from them amount to fifty-five. They are as follows.

1. *Royal College of Physicians of London*: Diplomas of Licentiate, Member, and Fellow.
2. *Royal College of Surgeons of England*: Diplomas of Member, Fellow, and Licentiate in Midwifery.
3. *Apothecaries' Society of London*: Licence.
4. *University of Oxford*: Degrees of Bachelor and Doctor of Medicine.
5. *University of Cambridge*: Degrees of Bachelor and Doctor of Medicine, and Master in Surgery.
6. *University of London*: Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
7. *University of Durham*: Licences in Medicine and in Surgery; Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
8. *Royal College of Physicians of Edinburgh*: Diplomas of Licentiate, Member, and Fellow.
9. *Royal College of Surgeons of Edinburgh*: Diplomas of Licentiate and Fellow.
10. *Faculty of Physicians and Surgeons of Glasgow*: Diplomas of Licentiate and Fellow.
11. *University of Aberdeen*: Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
12. *University of Edinburgh*: Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
13. *University of Glasgow*: Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
14. *University of St. Andrews*: Degrees of Bachelor of Medicine, Doctor of Medicine, and Master in Surgery.
15. *King and Queen's College of Physicians in Ireland*: Diploma of Licentiate, Fellow, and Licentiate in Midwifery.
16. *Royal College of Surgeons of Ireland*: Diplomas of Licentiate and Fellow.
17. *Apothecaries' Hall of Ireland*: Licence.
18. *University of Dublin*: Licences in Medicine and in Surgery; Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor in Surgery, Master in Surgery.
19. *Queen's University in Ireland*: Degrees of Doctor of Medicine and Master in Surgery; and Licence in Surgery.

In addition, the Royal College of Surgeons of England grants a licence in Dental Surgery.

Certificates and diplomas in State Medicine and

Public Health (which at present are not registrable) are conferred after examination by the Universities of Cambridge, London, Edinburgh, Glasgow, and Dublin; and by the Royal College of Physicians in Edinburgh.

The following is a general summary of the conditions required on the part of candidates for examination; but, for further details, our readers must consult the regulations issued yearly in the Students' numbers of our contemporaries; or apply to the officers of the respective Universities, Colleges, and Halls.

The regulations of the Examining Bodies are, with very few exceptions, framed in accordance with the Resolutions and Recommendations of the General Medical Council.

Every medical student is required to be registered at the office of the General Medical Council; prior to which he must have passed an examination in subjects of general education. As evidence of this are recognised. 1. The possession of a degree in Arts of an University of the United Kingdom or of the Colonies, or of some University recognised by the Medical Council; 2. A certificate of having passed an examination in subjects of general education conducted by some one or other of the educational bodies, a list of which is given with the "Recommendations of the General Medical Council". The Medical Council recommends that no such certificate should be accepted by any of the licensing boards, unless it testify that the candidate has been examined in the following subjects: 1. The English language, including Grammar and Composition; 2. Arithmetic, including Vulgar and Decimal Fractions, and Algebra, including Simple Equations; 3. Geometry—the first two books of Euclid, or the substance thereof; 4. Latin, including Translation and Grammar; 5. One of the following subjects at the option of the candidate: Greek; French; German; Elementary Mechanics of Solids and Fluids, meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics. The preliminary examination having been passed, the student should at once register, as the commencement of the course of professional study is not recognised as dating fifteen days earlier than the date of registration. Forms for such registration are supplied by the licensing bodies and at the schools and hospitals.

After passing the preliminary examination, the student may commence his medical education in one of the following ways (according to the regulations of the Licensing body with which he intends to become connected): 1. By attendance for one year on the practice of a provincial hospital or other public institution recognised for this purpose; 2. As the pupil, for one year, of a legally qualified surgeon, holding sufficient public appointments to afford such opportunities of practical instruction as shall be satisfactory to the authorities; 3. By entering at once at a recognised medical school.

The minimum period of medical study required is forty-five months from the date of registration as a student, of which time at least two years and a half must be passed at a recognised medical school. For the degrees of the Universities (except that of London) the candidate is required to spend a portion of the time of medical study at the University which grants the degree, or at a College in connection therewith.

To obtain a degree or licence, two examinations at least in professional subjects must be passed. The



first examination may be completed at or before the close of the second year of professional study, and embraces the following subjects: 1. Chemistry and Chemical Physics; 2. Anatomy; 3. Physiology; 4. Materia Medica and Pharmacy. The second or final examination, which must not be passed until the completion of the fourth year of study, comprises—1. Pathology (including Morbid Anatomy); 2. Medicine (including Medical Anatomy, Clinical Medicine, and Therapeutics); 3. Surgery (including Surgical Anatomy and Clinical Surgery); 4. Midwifery; 5. Forensic Medicine. This arrangement is of course subject to some variation; but the general principle of examining first in the elementary and afterwards in the practical subjects is invariably followed. Some of the examining bodies—such as the Universities in Scotland—divide the examinations into three or four parts.

**COURSE OF STUDY.**—With regard to the course of study, the prospectus of Guy's Hospital contains some excellent advice.

"During his first winter session, the student is advised to devote his chief attention to Anatomy. Immediately he has entered he should put down his name for 'a part'; and while unemployed in actual dissection, should spend as much time as possible in the dissecting-room, attend demonstrations, and become thoroughly familiar with the bones. Physiology and Chemistry should also be studied at this period. Opportunities should occasionally be taken for visiting the out-patient departments, and acquiring some familiarity with the more common diseases and injuries, and the application of anatomy and physiology in their recognition.

"In his first summer session the student will be chiefly occupied with Practical Chemistry, Materia Medica, Botany, and Comparative Anatomy.

"The second winter session should be devoted to gaining a thorough knowledge of Anatomy, Physiology, and Histology, in preparation for the primary examination of the College of Surgeons; and, in the following summer, Materia Medica, Pharmacy, and Chemistry, may be further studied.

"Though always keeping in view the necessity of passing the primary examination at the first opportunity, it will be possible for most students to take during the first year or early in the second winter session, the appointment of assistant-surgeon's clerk, or one or more of the junior appointments.

"As soon as the primary examinations are passed, the duties of surgical ward clerk should be undertaken, if not previously performed; and the wards, *post mortem* room, and out-patients rooms constantly attended.

"The student will be then qualified for the medical and surgical appointments, which he is required by the examining bodies to have fulfilled before presenting himself for their diplomas. It is not of great importance which is taken first, nor could any one arrangement be adhered to by all students, but the following order appears preferable: dresser in the surgery, assistant surgeon's dresser, medical ward clerk. In the first-named appointment, the student should practise the manipulations of minor surgery, while in the second he should include the observation of surgical diseases, and their treatment by operation or otherwise. In the appointment of medical ward clerk the elements of physical diagnosis should be learnt, every effort being made to train the eye, the hand, and the ear, as well as to learn how to use the various instruments of investigation.

The knowledge before acquired of microscopical and of chemical application will now be fully applied; and the subject of Morbid Anatomy should be studied as each case arises.

"The appointment of clerk in the out-patients' room—assistant-physician's clerk, obstetric out-patient's clerk—should follow, and those of *post mortem* clerk, dental surgeon's dresser, etc., may also be held advantageously during the third year. Cases of midwifery should not be attended until after a course of lectures on that subject, when the student should make it convenient to devote a month to the appointment of extern.

"Every student who desires to obtain the greatest advantage from his position, should seek to hold at least one, and, if possible, each in succession, of the higher students' appointments, viz., those of clinical assistant, full dresser, and resident obstetric assistant.

"Students who intend to take a degree in the University of London must somewhat deviate from the above course. They should defer entering the hospital until they have matriculated, and may with advantage pass the preliminary scientific examination before commencing the usual courses of Anatomy and Physiology. If, however, they have only matriculated, then the first year should be devoted to learning the rudiments of Human Anatomy, and attending the courses of Chemistry, Physics, Botany, and Comparative Anatomy, in preparation for the preliminary scientific examination. Special classes in each of these subjects are held and examination papers given. After this examination has been passed, the second year should be devoted to Anatomy, Physiology, and the other subjects of the first M.B. examination, and until this is passed it is advisable not to undertake any higher appointments than those of assistant surgeon's clerk, surgical ward clerk, and perhaps dresser in the surgery."

The following is taken with slight verbal alterations from the prospectus of Owens College, Manchester.

"During the first winter session the student should give his chief attention to Descriptive Anatomy and Dissections, and to Physiology and Systematic Chemistry. Students are strongly recommended to consider all these subjects as equally deserving of study, as, besides their independent claims, a competent knowledge of each is insisted upon by some of the examining boards.

"His first summer session should chiefly be devoted to Physiology, Practical Histology, Practical Anatomy, the Laboratory Course of Chemistry, and to Botany. A certain portion of his time should also be given to the practice of the Hospital and Clinical Instruction.

"In his second winter session he should strive to obtain a more exact knowledge of Anatomy, Physiology, and Histology, with the view of preparing himself for the primary examination of the College of Surgeons. He should also attend lectures on Medicine and Surgery, and Hospital Medical and Surgical Practice.

"In his second summer session, Materia Medica, Medical Jurisprudence and Hygiene, and Practical Pharmacy should be taken, and as much time as possible should be devoted to study in the wards, the *post mortem* room, and the out-patients' rooms.

"His third winter session should be devoted to the study of Medicine, Surgery, and Pathology; and in the ensuing summer session he should attend Midwifery, along with other special courses,

such as those of Pathological Histology and Ophthalmology.

The Royal Colleges of Physicians and Surgeons of Edinburgh recommend the following order of study for students who spend four years at a medical school.

*First Year.*—Anatomy, Practical Anatomy, Chemistry, Practical or Analytical Chemistry, Hospital.

*Second Year.*—Anatomy, Practical Anatomy, Physiology, Surgery, *Materia Medica* (the last either in this or the third year), Hospital.

*Third Year.*—Practice of Medicine, Clinical Surgery, Practical Anatomy, Practical Pharmacy, Clinical Medicine, Pathological Anatomy, Hospital.

*Fourth Year.*—Surgery or Clinical Surgery, Midwifery and the Diseases of Women and Children, Practice of Medicine or Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Hospital.

They also strongly recommend students to avail themselves of any opportunities which they may possess of attending, in addition to the courses of instruction which are absolutely required, lectures on Ophthalmic and Mental Diseases, also on Natural History and Comparative Anatomy, and of obtaining practical instruction in the use of the microscope.

If a portion of the four years be spent in pupilage with a practitioner or at a hospital or infirmary not possessing a medical school, some modification of the course of study laid down in the preceding plans may be required: but the general order will remain the same.

#### INSTRUCTION IN THE MEDICAL SCHOOLS.

The medical schools in London are those of St. Bartholomew's, Charing Cross, St. George's, Guy's, the London, St. Mary's, the Middlesex, St. Thomas's, and Westminster Hospitals; and the Medical Faculties of King's and University Colleges. To these may be added the London School of Medicine for Women, with which the Royal Free Hospital is connected for the purpose of clinical instruction, and Mr. Thomas Cooke's School of Anatomy and Surgery.

In the provinces in England, there are the medical departments of Queen's College, Birmingham, Owens College, Manchester, and the Medical College of the University of Durham, at Newcastle-on-Tyne; together with medical schools at Bristol, Leeds, Liverpool, and Sheffield. The Universities of Oxford and Cambridge do not profess to give a complete education; in fact, there is no medical school at Oxford; but instruction in many branches is provided for at Cambridge.

In Scotland, the medical schools in which a complete course of professional education is given, are those attached to the Universities of Aberdeen, Edinburgh, and Glasgow, the Extra-Academical School in Edinburgh, and the Anderson's College and the Royal Infirmary School of Medicine in Glasgow.

In Ireland, the medical schools are, the School of Physic in Ireland, the School of the Royal College of Surgeons of Ireland, and the Colleges at Belfast, Cork, and Galway, in connection with the Queen's University in Ireland. There are also several medical schools in Dublin: viz., the Carmichael School of Anatomy, Medicine, and Surgery; the Catholic University; Dr. Stevens's Hospital and Medical College; and

the Ledwich School of Anatomy, Medicine, and Surgery.

For information regarding these institutions reference must, as we have already said, be made to the published prospectuses. We shall, however, endeavour to classify a part of the information therein contained under certain heads, viz., Clinical Instruction; Practical Surgery; Special Departments; Practical Physiology; Hospital Appointments; Tutorial Instruction; and Scholarships, Exhibitions, and Prizes.

**CLINICAL INSTRUCTION.**—At all the hospitals connected with medical schools the physicians and surgeons deliver, at stated intervals, lectures on the cases under their care, in addition to making comments during their visits to the wards or in the operating theatre. In some instances, special provision is made by the appointment of one or more of the hospital staff as clinical professors or lecturers; and in several of the hospitals a certain number of beds are specially devoted to the purpose of clinical instruction. At Guy's Hospital, forty patients are set aside in the medical wards, and are visited and their cases lectured on by the physicians in the winter, and by the assistant-physicians in the summer session: the surgeons also select cases for clinical instruction. A similar arrangement exists at the London Hospital, where two wards containing thirty beds are devoted to the express purpose of teaching clinical medicine; the cases being lectured on by the physicians in the winter, and by the physicians or assistant-physicians in the summer. Special clinical professorships, in medicine and surgery, in addition to the ordinary clinical lectures given by the physicians and surgeons, exist at the King's and University College Hospitals. In the former, the professor of clinical medicine is Dr. George Johnson, and the professors of clinical surgery are Mr. John Wood and Mr. Lister. In University College Hospital there are two special chairs, known as the "Holme Professorships" of Clinical Medicine and Surgery. The Holme professor of clinical medicine is Dr. Wilson Fox; who delivers clinical lectures on Tuesdays and Thursdays on the significance of the general signs of disease, and on the special modes of examination, diagnosis, and treatment of individual cases. There are also two assistant professors of clinical medicine, Dr. Gowers and Dr. Poore, who hold classes for instruction in physical examination, the investigation of diseases of the nervous system, the examination of the urine, the use of the laryngoscope, etc. The Holme professor of clinical surgery, Mr. Christopher Heath, gives a clinical lecture once a week, and also holds a weekly clinical examination on surgical cases in the operating theatre; these examinations, while open to the whole class, being specially intended for the instruction of the senior students. Mr. Marcus Beck and Mr. A. E. Barker are assistant-teachers of clinical surgery. In Cambridge, clinical instruction in medicine and surgery is given at Addenbrooke's Hospital throughout the year. At Leeds, clinical classes meet at appointed hours to receive instruction in the wards from the physicians. In the Liverpool Royal Infirmary, Dr. Glynn, one of the physicians, gives, once a week during the winter, practical instruction in clinical medicine and the means of physical diagnosis. In the Owens College, Manchester, there is a special professorship of clinical medicine, held by Dr. William Roberts. Medical Clinical Classes are held by Dr. Roberts and Dr. Lenn in the winter, and by Dr. Simpson and Dr.



Morgan in the summer session. The instruction, which is conducted in the Manchester Royal Infirmary, consists of clinical lectures on cases, and the methodical examination of patients. Each student in turn is required, under the direction of the teacher, to examine patients, to elicit the symptoms and physical signs of the disease, to indicate the diagnosis and prognosis, and to lay down the plan of treatment. A similar plan is followed in the Surgical Clinical Classes, which are conducted by the surgeons of the Infirmary—Mr. Heath and Mr. Lund in the winter, and Mr. Bowring and Mr. Bradley in the summer—the students being required, in addition, to perform the necessary manipulations, when practicable. In the Infirmarys of Aberdeen, Edinburgh, and Glasgow, clinical lectures on medicine, surgery, and midwifery are delivered by the medical staff of each institution. The Universities of Edinburgh and Glasgow have special professors of Clinical Medicine and Surgery. In the medical schools of Ireland, clinical courses are given through the session.

In connection with the subject of Clinical Instruction, reference must be made to means provided at several hospitals for the special purpose of training the students in the observation of cases. At the Charing Cross Hospital, practical instruction in auscultation, in health and in disease, is given once a week by Dr. Irvine; while Dr. Houghton instructs in case-taking. In Guy's Hospital, the ward clerks (of whom 150 or more are appointed during the year) are assisted in the examination of cases and the preparation of reports by the medical and surgical registrars, who also instruct them in physical diagnosis and in chemical and microscopical investigation. Similarly, at the London Hospital, the clinical clerks and dressers are assisted by the house-physicians and house-surgeons. At several of the medical schools there are medical tutors, who instruct the students in the physical examination and systematic description of cases. The provision made at University College Hospital has been referred to above. In connection with the Owens College, classes for medical demonstration are held in the Manchester Royal Infirmary twice weekly during the summer by two of the medical officers; in which classes instruction is given in anatomy as applied to medicine, in physical and chemical examination, etc. In the University of Edinburgh, a class for instruction in clinical medicine is held in the wards of the Royal Infirmary by the clinical tutor.

**PRACTICAL SURGERY.**—At most of the schools, special provision is made for instruction in this important branch of medical education. The courses embrace such subjects as—the application of anatomy to surgery on the living person or the dead body; the methods of proceeding, and the manipulations necessary, in order to detect the effects of diseases and accidents; the performance of operations on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated by preparations and recent specimens. The course of practical instruction is generally distinct from that of systematic surgery, and is in many instances given in the summer session. In the Westminster Hospital, however, besides a summer course of operative surgery, a winter course of practical surgery is given every second year, alternately with the systematic course.

**SPECIAL DEPARTMENTS.**—Due provision is made for instruction in *Midwifery* so as to enable students

to meet the requirements of the examining bodies; but we do not call to mind any arrangement in any of the schools demanding special notice.

**Ophthalmic Surgery** is taught by lectures and observation of cases at all the London schools; each hospital receiving ophthalmic patients except the Charing Cross, the pupils of which are admitted to the practice of the Royal Westminster Ophthalmic Hospital. As far as can be gathered from the prospectuses, the material available for the practical teaching of this subject (as far as regards in-patients) is as follows: St. Bartholomew's Hospital, 26 beds; Charing Cross (Royal Westminster Ophthalmic Hospital), 50 beds; Guy's Hospital, 50 beds (also about 2,500 out-patients, and an average of more than 500 operations); London Hospital, 12 beds. The other hospitals have beds for ophthalmic cases, but the number is not stated. Among the provincial schools, those of the Universities and at Bristol and Newcastle-on-Tyne are the only ones in which there is no special department for teaching ophthalmic surgery. In the Universities of Aberdeen and Glasgow, instruction in ophthalmic surgery is given; and the students are admitted to see the practice of ophthalmic institutions in those cities. In the Extra-academical School of Edinburgh, and in Anderson's College and the Royal Infirmary School of Medicine in Glasgow, courses of lectures on the subject are given. In Ireland provision is made for the teaching of ophthalmic surgery in most of the medical schools of Dublin.

**Aural Surgery** is taught as a special branch at all the London medical schools, and at the Leeds School of Medicine and the Manchester Royal Infirmary among the provincial schools; also in the Extra-academical School in Edinburgh, and in Glasgow Royal Infirmary School of Medicine.

**Diseases of the Throat.**—Special instruction in the diagnosis and treatment of diseases of the throat and larynx, and the use of the laryngoscope, is given at St. Bartholomew's Hospital by Dr. Lauder Brunton; at the Charing Cross Hospital by Dr. Irvine; at St. George's Hospital by Dr. Whipple; at King's College Hospital by Dr. Curnow; at the London Hospital by Dr. Morell Mackenzie, who delivers a course of lectures on the subject; at St. Mary's Hospital by Mr. Norton; at the Middlesex Hospital by Mr. Clark (with Diseases of the Ear); at St. Thomas's Hospital by Dr. Greenfield; at University College Hospital by Dr. Poore; at the Westminster Hospital by Dr. De Havilland Hall; at the Manchester Royal Infirmary by Dr. H. Simpson; and in the Glasgow Royal Infirmary by Dr. E. Watson.

**Diseases of the Skin.**—For the teaching of this important department of medicine, special provision is made in all the London hospitals; and in the Manchester Royal Infirmary. Demonstrations of cases, and clinical lectures, are given at stated intervals, generally once a week. In University College Hospital, the special department for cutaneous diseases is under the charge of Dr. Tilbury Fox, who delivers a clinical lecture once a fortnight. A course of lectures is given in the Edinburgh Extra-academical School. In Dublin, a course of instruction on diseases of the skin is given at the Adelaide Hospital.

**Orthopædic Surgery** is taught at St. Bartholomew's Hospital by Mr. Willett; and also at St. George's Hospital by Mr. Haward; and at the Westminster Hospital by Mr. Richard Davy. Mr. Hardie gives instruction on this subject at the Manchester Royal Infirmary.

*Mental Diseases.*—Lectures on Psychological Medicine are delivered as a separate course in most of the London schools. Special arrangements for clinical instruction are made in several instances; thus the students of St. Bartholomew's Hospital have access to a large public asylum; those of Guy's Hospital are admitted to Bethlem Hospital, and those of the London Hospital to Bethnal House. Two students of the London schools, qualified to practise, are appointed for six months as resident clinical assistants in Bethlem Hospital. At the Leeds School of Medicine, the students attend the West Riding Lunatic Asylum at Wakefield, where Dr. Major, the medical director, gives clinical lectures in addition to a course of systematic lectures at the school. The pupils of the Liverpool Royal Infirmary School of Medicine have the opportunity of receiving instruction at the Rainhill Asylum, from Dr. Rogers. In Manchester, demonstrations of the various forms of insanity are given to senior students by Mr. G. W. Mould. At the Newcastle-on-Tyne College, instruction in psychological medicine is given by Mr. Wickham, medical superintendent of Coxbridge Asylum. In the University of Edinburgh, Dr. Grainger Stewart, the Professor of Medicine, gives a course of Medical Psychology and Mental Diseases, with practical instruction at an Asylum. In the Extra-academical School, a similar course is delivered by Dr. Batty Tuke. In the Glasgow Royal Infirmary School of Medicine, a course of lectures on Mental Diseases is given by Dr. A. Robertson, in the City Parochial Asylum. In Dublin, special courses of lectures on mental diseases are given in the Richmond, Whitworth, and Hardwicke Hospitals, adjoining which is a large asylum containing over 1000 patients. The lectures on psychological medicine are mostly delivered during the summer session.

*Public Health.*—Special courses of lectures on this subject are given at Charing Cross, Guy's, the Middlesex, and St. Thomas's Hospitals, and at King's College. At St. George's Hospital, it is included in the course of Medicine; and at the London, St. Mary's and Westminster Hospitals, in that on Forensic Medicine. In University College, besides the lectures, instruction in the chemical and microscopic examination of air, water, and food, is given in the hygienic laboratory. In most of the provincial schools the subject is included in the lectures on Forensic Medicine; in the Sheffield Medical School, a course of lectures is given by Dr. Drew, and in the Newcastle College of Medicine by Dr. Armstrong. In Scotland, also, the instruction in Public Health is given in connection with that on Medical Jurisprudence. In Dublin, there is a professorship of Hygiene in the school of the Royal College of Surgeons.

**PRACTICAL PHYSIOLOGY.**—This subject is taught in most of the schools; but more elaborate provision is made in some cases than in others.

At *St. Bartholomew's Hospital*, the course embraces—1. Microscopic Anatomy or Histology; 2. Physiological Chemistry; 3. Physiological Physics. It is conducted by the demonstrators under the superintendence of the lecturers on Physiology and Chemistry. Dr. Klein gives a course of lectures on General Histology, with demonstrations. The lectures are delivered on Mondays, and form part of the course on General Anatomy and Physiology.

At *Guy's Hospital*, Mr. Golding-Bird gives a course of Histological demonstrations of the ele-

mentary tissues and the chief organs of the body, with their behaviour and reagents, as studied with the microscope. The course includes about thirty-three demonstrations, and is gone through twice in the winter session. A laboratory class in Practical Physiology, intended for advanced students, is held by Dr. Pye-Smith in the summer.

At *University College*, instruction in Practical Physiology is given by Dr. Burdon Sanderson (the Jodrell Professor of Physiology) and Mr. Schafer (the Assistant Professor of Physiology). The course of Practical Physiology and Histology consists of practical lessons in Histology and the use of the Microscope, and in Chemical Physiology. The class is divided into two equal parts, which meet on alternate days. Physiological demonstrations are given from time to time in the laboratory.—A course of lectures on Embryology will be given during the summer session by the assistant professor of Physiology. In addition, a series of practical lessons will be given in the laboratory on the subjects treated of in the lectures.—Persons desirous of engaging in original investigation in Physiology and Histology may be admitted to the laboratory as workers on the nomination of the Jodrell Professor. An advanced course of Practical Physiology, specially adapted to meet the requirements of candidates for the second B.Sc. Examinations of the University of London will be given during the summer session.

At the *Westminster Hospital*, a course of lectures and demonstrations will be given by Mr. Murrell. The course will consist of three parts:—1, Thirty lectures and demonstrations in the Histology of the Simple Normal Tissues, delivered during May, June, and July; 2, Thirty lectures and demonstrations on the Histology of the Normal Organs and Viscera, delivered in October, November, and December; 3, A course of about twelve demonstrations on Physiological Chemistry.

In *Owens College, Manchester*, a very complete course of Practical Physiology is conducted during the summer by Dr. Arthur Gamgee, the Brackenbury Professor of Physiology. The class meets daily for Practical Histology in Chemical Work, and free demonstrations in Experimental Physiology. The Physiological Laboratory is open daily during the winter and summer sessions. It is proposed to admit the following classes of students, viz.:—(a) those who intend to prosecute original researches in Experimental Physiology or Physiological Chemistry under the direction of the professor; and (b) those who desire to devote special attention to Histology.

Practical Physiology is taught in the University of Edinburgh, by Professor Rutherford; in that of Aberdeen by Professor Stirling; and in that of Glasgow by Professor McKendrick. Courses are also given in the Edinburgh Extra-Academical School, and in the Glasgow Royal Infirmary School of Medicine and in Anderson's College.

**HOSPITAL APPOINTMENTS.**—Numerous appointments at the hospitals are open to the diligent student, without payment (except in the few cases hereinafter noticed) of any fee. For the resident appointments, a qualification to practise is required; and, in some instances, a salary is paid in addition to the provision of rooms and board.

At *St. Bartholomew's Hospital*, four house-physicians and four house-surgeons are appointed annually. A resident midwifery assistant is appointed every six months; an ophthalmic house-surgeon is also appointed for six months, and may be re-



elected. An assistant-chloroformist is appointed annually. Each of these officers is provided with rooms by the hospital authorities, and receives an annual salary of £25. Clinical clerks to the medical in-patients, and to the physician-accoucheur, also clerks and dressers for the out-patient and special departments, are chosen from among the students. Sixteen dressers for the surgical in-patients are selected each year; and other in-patient dresserships may be obtained on payment of £12 12s. for three months, £18 18s. for six months, or £26 5s. for twelve months.

At *Charing Cross Hospital*, a medical and a surgical registrar are appointed, each with a salary of £40 a year. A resident medical officer and a resident surgical officer are selected by competitive examination every six months from candidates qualified to practise. A resident obstetrical officer, assistant medical officer, and assistant surgical officer, are appointed every six months after examination, preference in each case being given to a legally-qualified man. The clinical clerks, three to each physician and two to each assistant-physician, and the dressers—three to each surgeon and assistant-surgeon, and also two clinical clerks to the physician-accoucheur, are appointed for periods of four months. A pathological assistant, who assists at the *post mortem* examination is appointed for three months.

At *St. George's Hospital*, house-physicians and house-surgeons are appointed half yearly, from among the perpetual pupils. The appointments are held for twelve months, with board and residence in the hospital free of expense. Each pays a deposit of 50 guineas, which is returned if the duties of his office have been satisfactorily performed. A curator of the Pathological Museum and a medical and a surgical registrar, each with a salary of £50; an ophthalmic registrar and a microscopic pathologist, each with a salary of £25; and an obstetric assistant with board, residence, and a salary of £100, are appointed annually. An assistant house-physician, an assistant house-surgeon, and two assistant medical registrars, are appointed every six months; and an assistant surgical registrar from time to time. Clinical clerks and dressers are also appointed.

At *Guy's Hospital*, there are appointed during the year 6 senior and 6 junior house-physicians, 6 senior and 6 junior house-surgeons, 12 senior and 12 junior obstetric residents, 24 surgeons' dressers, 18 clinical assistants, 12 dressers in the eye wards, 24 *post mortem* clerks, 24 obstetric out-patient clerks, 32 assistant-physicians' clerks, 12 dental surgeons' dressers, 12 aural surgeons' dressers, 64 medical clinical clerks, 72 or more assistant-surgeons' dressers and dressers in the surgery, 80 surgical clinical clerks, 32 assistant surgeons' clerks, 60 extern obstetric assistants, and clerks in the room for applying electricity. All students have opportunities of becoming clinical ward clerks to the physicians and surgeons, as well as dressers to the assistant-surgeons and dressers in the surgery; and the diligence with which they perform the duties of these offices is an important test of their fitness for the higher posts.

At *King's College Hospital*, a physician's assistant, two house-surgeons, a physician-accoucheur's assistant, clinical clerks, and dressers, are chosen by examination from matriculated students of the College who are pupils at the hospital.

At the *London Hospital*, every student is expected to act as clinical clerk to the medical out-patients for six weeks in his second year, and to dress for three months in the surgical out-patient department;

also to act as *post mortem* clerk for three months. The following appointments are also made: five house-physicians (qualified for registration) every six months; clinical clerks (open to all full pupils) every six months; a resident accoucheur (qualified) every six months; a clinical obstetric clerk, every three months; four house-surgeons, for six months (each being provided with board and residence); surgical dressing pupils, three clinical assistants (each with a salary at the rate of £80 *per annum*), a medical and a surgical registrar (each with £100 *per annum*), a dental assistant, and ophthalmic and aural dressers.

At *St. Mary's Hospital*, three resident medical officers are appointed for twelve months, and a resident obstetric officer for six months. They all reside in the hospital, free of expense. All students are required to perform the duties of clinical clerk and dresser for six months after passing the primary examination. Students of the third year are expected to assist in the out-patient department for three months. A medical registrar is appointed with a salary of £100 a year.

At the *Middlesex Hospital*, two house-surgeons and three resident physicians' assistants are appointed by competitive examination. The resident physicians' assistants, and resident obstetric physician's assistant, pay, on appointment, fees varying from ten to twenty guineas, according to circumstances. The appointments of clinical clerks and dressers are so arranged that every student may at some period of his attendance on hospital practice hold both a clerkship and a dressership.

At *St. Thomas's Hospital*, two house-physicians and two assistant house-physicians, two house surgeons and two assistant house-surgeons, and a resident accoucheur, are selected from students who have obtained professional diplomas. An ophthalmic assistant, with a salary of £50, is also appointed. Clinical clerks and dressers to in-patients are selected from pupils, to the number in all of at least 48 each year; and clinical clerks and dressers to out-patients to the number of 40 or 50 each year. Two registrars, at an annual salary of £100 each, are appointed each year. There are also numerous minor appointments of anatomical assistants, prosectors, obstetric clerk, etc., open to all students.

In *University College Hospital*, six physicians' assistants, six house-surgeons, and four obstetric assistants, are selected annually by examination from among the senior students. Physicians' clerks, surgeons' dressers, ward clerks, and ophthalmic surgeon's assistants, are selected from among the pupils who are also students of the College. The physicians' assistants, obstetric assistant, and house-surgeons, pay for their board in the hospital.

At the *Westminster Hospital*, a medical and a surgical registrar are appointed annually, each with a salary of £40. A house-physician, house-surgeon, and resident obstetric assistant, are appointed by examination for six months; each is required to pay a deposit of £20, but receives £25 at the expiration of his term of office if the duties have been performed satisfactorily. An assistant house-surgeon is appointed by examination. Clinical assistants to the assistant-physicians and assistant-surgeons and to the officers in charge of special departments are appointed from among the most advanced students of the fourth year. Every student is expected to act as out-patient dresser during three months of his first year, and afterwards to hold the office of

in-patient dresser and clinical clerk during a period of four months each.

In the *Birmingham General Hospital*, a resident medical and a resident surgical assistant, and two resident dressers, are appointed, each for six months.

At the *Queen's Hospital, Birmingham*, a resident obstetric assistant is appointed every six months, and a resident dresser every three months.

At the *Bristol Royal Infirmary*, each physician appoints a clinical clerk. The surgeons' dressers, when sufficiently qualified, reside in the hospital in weekly rotation, and act under the supervision of the house-surgeon. The dressers pay the following fees (in addition to those for hospital practice): for one year, £12 12s.; for two years, £21; for three years, £26 5s. A pathological clerk is appointed every three months. Apprentices to the house-surgeon are received for five years, and pay a fee of £315, which includes residence and hospital practice, but not dressership. House-pupils are also admitted at the rate of £52 10s. *per annum*, with a fee of £52 10s. to the house-surgeon.

At the *Bristol General Hospital*, clinical clerks, dressers, and obstetric clerks are appointed. The clinical clerks and dressers pay each an extra fee of £5 5s. for six months; and the obstetric clerks £3 3s. for three months. Resident pupils are received, and pay £100 for the first year, and £60 for each subsequent year; or £260 for five years.

In the *Leeds General Infirmary*, all students must hold the office of clinical clerk and dresser. A house-physician and house-surgeon are elected from time to time. There are four resident assistants; two are elected every six months, and hold office for one year.

At the *Liverpool Royal Infirmary*, two house-physicians and three house-surgeons are selected (by competitive examination if necessary) from pupils of the school who have obtained a qualification to practise; they hold office for six months. Three clinical clerks are appointed to each physician, and three or more dressers to each surgeon; they hold office for three months. *Post mortem* clerks are appointed for periods of six weeks. This appointment is required to be held by every student.

At the *Manchester Royal Infirmary*, a registrar and a pathological registrar are appointed annually. The following resident medical officers are appointed for two years: Infirmary, salary, £250 *per annum*; at Cheadle Lunatic Asylum, £150 *per annum*; at Monsall Fever Hospital, £200 *per annum*. A resident surgical officer is appointed annually, and receives £150; and an accident house-surgeon for six months, receives £40. Four physicians' assistants are appointed in each year; each holds office for six months, and receives £21. Four resident clinical clerks are appointed yearly for the Infirmary, two for Monsall, and two for Cheadle. Eight resident surgical dressers are appointed annually. The clerks and dressers hold office for six months.

In the *Newcastle-on-Tyne Infirmary*, four resident dressers are appointed twice a year; each pays a fee of £10 10s. for six months. Two assistants to the pathologist are appointed in May and December.

In the *Edinburgh Royal Infirmary*, four resident physicians and four resident surgeons are appointed for six months. Clinical clerks are also appointed; and each surgeon appoints several dressers for six months. There are also assistants in the pathological department.

In the *Glasgow Royal Infirmary*, five physicians' and five surgeons' assistants are boarded and lodged

in the Hospital at the rate of £25 *per annum*. The appointments can be held for twelve months, six in the medical and six in the surgical wards. These appointments are open to students who have passed all their examinations except the last, or to qualified gentlemen. There are also numerous clerkships and dresserships.

**TUTORIAL INSTRUCTION.**—In addition to the ordinary courses of lectures and hospital practice, and practical instruction, many of the medical schools have an officer whose special duty it is to direct the pupils in their studies, and to hold classes for the guidance of those who are about to present themselves for examination before the licensing boards.

At *St. Bartholomew's Hospital*, it is one of the duties of the wardens to direct the studies of the resident students; but it is recommended that all students should seek his advice in questions relating to education. Students preparing for examinations are examined in classes by the lecturers, demonstrators, and medical tutors.

At *Guy's Hospital*, the medical and surgical registrars, and the demonstrators of Anatomy and Chemistry, assist pupils in their studies, and prepare them for their examinations by special class instruction, throughout both sessions. Special classes are held for the assistance of students preparing for the Preliminary Scientific and first M.B. examinations of the University of London.

At *King's College*, a medical tutor assists, by instruction and examination, all students in the subjects of the lectures of their first winter and summer session, as well as those preparing for the Preliminary Scientific Examination of the University of London.

In the *London Hospital*, special attention is paid to the preparation of students for their examinations at the Colleges of Physicians and of Surgeons, the Apothecaries' Hall, and the University of London. Students are also prepared for the Matriculation, Preliminary Scientific, and First B.Sc. examinations of the University of London.

At *St. Mary's Hospital*, the medical tutor assists the students in preparing for their final examinations, testing their knowledge by various means.

In the *Middlesex Hospital*, the college tutor assists all general students, especially those who are preparing for their primary examination before any of the licensing boards; and his classes are arranged with a view to obviate the necessity of obtaining private teaching apart from that of the Medical School.

At *St. Thomas's Hospital*, classes are held for the preparation of students for the Preliminary Scientific and First M.B. examinations of the University of London.

In *University College*, gentlemen who desire assistance in their studies may obtain the same within the College on application to the respective professors.

At the *Westminster Hospital*, a tutorial staff will hold frequent *viva voce* and written examinations, to aid the students in their work and in preparations for examination. Special classes will be formed for the assistance of students preparing for the examinations of the University of London.

In the *Queen's College, Birmingham*, there is a medical tutor, who holds classes for junior students throughout the winter and summer sessions. Special classes are also held for the examinations of the University of London.



In the *University of Durham College of Medicine*, at Newcastle-on-Tyne, a medical tutor assists the pupils in their studies and in preparing for examination.

**SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.**—In addition to the rewards for diligence in professional study, many of the medical schools offer yearly one or more scholarships, usually in general literature, and in some instances in science. The competition is open to gentlemen about to commence their hospital studies; and the successful candidate is expected to enter as a pupil of the school in which the examination has been passed. In the examination in general literature, the subjects are usually those of preliminary education as defined by the General Medical Council, or of the Matriculation Examination of the University of London. In the Science scholarships, the usual subjects are Chemistry, Botany, and Zoology. The yearly value of the scholarships and exhibitions varies from £100 to £10.

There are also many scholarships and exhibitions, varying in value from £100 to £20, open to students during their period of professional study, or (as at St. George's Hospital) within a limited time after they have passed their final examinations for licences to practise. These exhibitions are in some cases (as at St. Bartholomew's and the London Hospitals) awarded after examination in subjects of preliminary education; but in most of the schools they are given after examination in groups of subjects of professional education, elementary or practical.

Special rewards are also offered in many of the schools for evidence of proficiency in clinical observation.

For further information respecting the scholarships and exhibitions, and regarding the class prizes, as well as for many details which we are obliged to omit, our readers must consult the prospectuses of the schools and our advertising columns.

## MEDICAL GRADUATION IN FRANCE.

DEGREES in Medicine of the University of France are conferred by the Faculties of Paris, Montpellier, Nancy, and Lyons, under regulations laid down by the Government.

A Candidate for a degree in Medicine of the University of France must, when he enters on his medical studies, have attained his eighteenth year, and produce a certificate of his birth, duly legalised, and, if he be a minor, the consent of his father or guardian for the step he is taking. He must, likewise, be furnished with a certificate of his personal respectability (*bonne vie et mœurs*), and, if he be a minor, and his father or guardian do not live in town, he must find a surety. A course of study of four years is necessary before the student can be admitted to examination for the degree of Doctor of Medicine, or of Medicine and Surgery. The student must enter in November, when the scholastic year begins. On lodging the above papers with the Secretary of the Faculty, together with the diploma of *bachelier-ès-lettres*, he must enter his name, etc., in a register kept for that purpose, and is given a *carte d'inscription*. He renews his inscription every quarter, until he has taken out sixteen inscriptions.

At the end of the first three years of study, the student has to submit to a series of preliminary examinations, termed *examen de fin d'année*, which is divided into three parts, and which may be passed at once or in the course of three years. The first comprises physics, chemistry, and natural history, considered in their applications to medicine; the elements of anatomy (bones, joints, and muscles), and the elements of physiology; and the third consists of medical and surgical pathology. By the end of the third year, if he have not done so before, the foreign as well as the French student must produce the diploma of *bachelier-ès-sciences* in the French University, for which he is examined in physics, chemistry, and natural history. For British students, however, the degree of Bachelor of Arts, or a certificate of having passed the matriculation examination of any of the Universities of Great Britain, would be accepted as equivalent to the French degree, for which latter the cost is 50 francs, or 2*l.* of English money. The examinations of the *fin d'année* take place in July of the first, second, and third scholastic years on the subjects mentioned above; failing in any of which, and in another trial in November, the student cannot present himself again for examination, nor take out another inscription, till after the lapse of a year. From the eighth to the sixteenth inscription, the student must attend a hospital. At the end of the fourth year he can go in for the final examinations for the degree of doctor, termed *examens du doctorat*, or *examens de réception*. These consist of five parts, and after them a thesis. The following are the subjects of the five examinations.

1. Anatomy, physiology, and histology, with dissection.
2. Medical and surgical pathology, operative surgery, operations on the dead body.
3. Medical natural history, medical physics, medical chemistry, pharmacology.
4. Hygiene, forensic medicine, materia medica, therapeutics.
5. Clinical medicine, clinical surgery, and clinical midwifery.

The last examination is strictly practical. Three cases, one of each in medicine, surgery, and midwifery) in the hospital are selected; and the diagnoses, prognoses, and treatment, are expected to be given.

The thesis consists of a dissertation in French, printed at the expense of the candidate, on a subject selected by him in medicine or surgery. The candidate has then to undergo a *viva voce* examination on the subject of his dissertation, and on fourteen questions drawn by lot, corresponding to the fourteen branches of medical science taught at the school, and which are printed at the end of the thesis.

The candidates are examined in French, *viva voce*, and one after the other, in the alphabetical order of their names, for three-quarters of an hour at each examination, before a board composed of a president and two or three members, all of whom are professors or professors *aggrégés* of the faculty.

Before going up, however, for the examination of the thesis, the candidate has to submit at the secretary's office a certificate of the right to pass the examination, which he obtains from the Minister of Public Instruction, and at the same time deposit the price of his diploma, and the thesis in manuscript. He then selects a professor, whose duty will be to examine the thesis; and, if not disapproved, the thesis is printed.

In the event of the candidate being rejected, another trial is generally allowed at the end of three months.

For the degree of Doctor in Surgery, the candidate will have to submit to a further examination.

The fees, which are fixed by law, amount in all to 1,272 francs, or about 53*l*.

A foreigner holding medical qualifications to practise medicine, if desirous of obtaining the degree of the University of France, must show to the Minister of Public Instruction his diploma, and the certificates of the course of study which he has undergone in his own University or Medical School. The Minister, if satisfied, will authorise the candidate to present himself for the five final examinations (*examens de réception*). These are conducted in the French language. The fees are as follows: each examination 90 francs = 45*0* francs; thesis, 240 francs; fifteen inscriptions, 520 francs; three *examens de fin d'année*, 90 francs; diplomas of *bachelier ès lettres et ès sciences*, 100 francs; in all, 1,400 francs. It will be seen that the candidate has to pay all the fees, although exempted from the necessity of passing the preliminary examinations, and those for the *bachelier ès lettres et ès sciences*.

The regulations affecting medical degrees in France have recently been altered by the French Government. The following is a translation of the code issued on June 20, 1878.

1. The studies necessary for obtaining the degree of Doctor of Medicine last four years; during the first three years they may be carried on either in the Faculties in the *Ecoles de plein exercice*, or in the preparatory schools of medicine and pharmacy. The studies of the fourth year can only be made in a Faculty or in an *Ecole de plein exercice*.

2. The candidates must produce, when they take the first inscription, the diploma of Bachelor of Sciences, limited as regards the mathematical part. They must undergo five examinations and defend a thesis. The second, third, and fifth examinations are divided into two parts. The *examens de fin d'année* are suppressed.

3. The five examinations are on the following subjects. *First Examination*: Physics, chemistry, medical natural history. *Second Examination*: First part, anatomy and histology; second part, physiology. *Third Examination*: First part, external pathology (surgery), midwifery, operative surgery; second part, internal pathology (medicine), general pathology. *Fourth Examination*: Hygiene, legal medicine, therapeutics, *materia medica*, and pharmacology. *Fifth Examination*: First part, clinical surgery and obstetrics; second part, clinical medicine, practical demonstrations in pathological anatomy; and a thesis on a subject chosen by the candidate.

4. The first examination takes place after the fourth inscription and before the fifth; the first part of the second examination, after the tenth inscription, and before the twelfth; and the second part after the twelfth inscription and before the fourteenth. The third examination cannot be passed until the expiration of the sixth *trimestre* of study. Any candidate who does not pass the first examination in November, at the latest, will be put back to the end of the scholastic year, and will not be permitted to take out any inscription during the course of that year.

5. Candidates for the doctorate, pupils of *écoles de plein exercice* or of the preparatory schools, are ex-

amined by the Faculties at the periods fixed in the preceding article. They may, however, without interrupting their studies, defer the first examination until after the twelfth inscription. In that case they must pass the second examination (first and second parts) before the thirteenth inscription, and, from the commencement of the second year of study, are subjected to interrogations at the end of each six months, the results of which are transmitted to the Faculties, to be taken into account in the examinations for the doctorate.

6. The inscriptions for *officier de santé* cannot, under any circumstances, be converted into inscriptions for the doctorate, in the case of pupils actually studying; this conversion may be permitted in the case of *officiers de santé* who have practised medicine for at least two years.

7. Practical work in the laboratory, dissection, and residence near the hospitals, are obligatory. Each annual period of laboratory work and dissection comprises a six months' course, or *semestre*. Residence near the hospitals must not continue less than two years.

8. The fees to be paid by candidates for the degree of Doctor in Medicine are fixed as follows. Sixteen inscriptions at 32 francs 50 centimes each = 520 francs; eight examinations at 30 francs = 240 francs.

Sixteen inscriptions at 32 francs 50 centimes each	...	...	...	520 francs.
Eight examinations at 30 francs	...	...	...	240 "
Eight certificates of proficiency at 25 francs	...	...	...	200 "
Expenses of materials for practical study, first year, 60 francs; second and third years, each 40 francs; fourth year, 20 francs	...	...	...	160 "
Thesis	...	...	...	100 "
Certificate of proficiency	...	...	...	40 "
Diploma	...	...	...	100 "
Total	...	...	...	1,360 "

9. Every candidate who, without an excuse admitted by the jury, does not answer when his name is called, on the day of which notice has been given to him, will be sent back for three months, and will forfeit the fees which he has paid.

10. The fees paid by the pupils of the Faculties go to the public treasury. The fees paid for inscriptions and for practical work by the pupils of the *écoles de plein exercice* and the preparatory schools go to the municipal treasuries.

11. The present decree will come into force on November 1, 1879. Candidates inscribed before that time may choose whether they will undergo the new mode of examination or that existing. If they prefer the new mode they will have in all cases to undergo all the examinations established by section 3 as above.

#### MEDICAL EDUCATION IN FRANCE.

Medical Education is given in France in the several Faculties of Medicine, and also in certain schools.

#### FACULTY OF MEDICINE IN PARIS.

The School of Medicine in Paris is open not only to the French public, but to all who wish to attend the courses and take degrees. Great facilities are afforded to British and foreign students for the



prosecution of their studies, all lectures being given gratuitously, and no payment being required for hospital attendance. For dissections, however, a payment of 30 *francs* or more is expected from each student.

The medical sessions begin for winter on October 15th, and for summer on April 15th of each year.

The instruction in the Faculty of Medicine in Paris is given by the following professors: M. Sappey, Anatomy; M. Robin, Histology; M. Béclard, Physiology; M. Wurtz, Medical Chemistry; M. Baillou, Natural History; M. Gavarret, Medical Physics; M. Regnaud, Pharmacology; MM. Jacoud and Peter, Internal Pathology or Medicine; M. Trélat, External Pathology or Surgery; M. Le Fort, Practical Surgery; M. Gubler, *Materia Medica* and Therapeutics; M. Charcot, Pathological Anatomy; M. Pajot, Midwifery; M. Bouchardat, Hygiene; M. Tardieu, Forensic Medicine; M. Chauffard, General Pathology and Therapeutics; M. Vulpian, Comparative and Experimental Medicine; MM. G. Séé, Lasègue, Hardy, Potain, Clinical Medicine; MM. Gosselin, Richet, Broca, Verneuil, Clinical Surgery; M. Depaul, Clinical Midwifery; M. Parrot, History of Medicine; M. Ball, Diseases of the Mind and Nervous System. Supplementary courses are also given on Ophthalmology (M. Panas) and Diseases of the Skin, Diseases of Children, Venereal Diseases (M. Fournier).

The Faculty of Medicine possesses laboratories for Normal Histology (director, M. Ch. Robin), Physiology (Professor Béclard), Pathological Anatomy (Professor Charcot), Experimental Pathology (Professor Vulpian), Therapeutics (Professor Gubler), Biological Chemistry (M. Gautier), Pharmacology (Professor Regnaud).

In consequence of limited accommodation and restricted pecuniary means, these laboratories are, as a rule, incapable of being so useful as such institutions might be expected to be. It is found necessary to limit their use to medical men and to students who are pursuing researches for some definite purpose, such as the preparation of their theses. No payment is required; the demonstrators (*préparateurs*) aid with advice; the apparatus is at the disposal of the workers in the laboratories, but they generally have to pay for animals and other objects which they may require.

There is also a Chemical Laboratory belonging to the Faculty, to which the students are admitted without fee; they pay, however, the expenses incurred in their studies.

Attached to the Faculty of Medicine are the Orfila Museum of Anatomy and Zoology, at the École de Médecine; and the Dupuytren Museum of Pathological Anatomy, in the École Pratique.

The prizes of the Faculty of Medicine are the following. The Corvisart prize, a gold medal of the value of 400 *francs* (£16) is offered for competition to all pupils of the Faculty who have also entered to one of the internal clinics. The subject is some question in medicine, the answer to which must be derived exclusively from the facts observed in hospital practice. The Monthyon prize, consisting of a vermillion medal and 300 *francs*, is awarded to the author of the best essay on the prevalent diseases of the preceding year, their characters, symptoms, and treatment. The Barbier prize of 2,000 *francs* (80*l.*) is offered annually to the inventor of an operation, or of instruments, bandages, etc., of general utility and superior to anything of the kind that has been already in use. The Chateavillard prize, also

of 2,000 *francs*, is awarded yearly to the author of the best work on the medical sciences, printed between January 1 and December 31 in the preceding year. The works sent for competition must be in French. Graduation theses are admitted. An annual sum of 1,000 *francs* (40*l.*) is awarded, under the will of the late Baron de Frémont, to a meritorious but poor student. The Lacaze prize of 10,000 *francs* (400*l.*) is offered biennially for the best essay on phthisis or on typhoid fever—the subjects being taken alternately. After the examination of the theses, the Faculty names to the Minister of Public Instruction the candidates worthy of special distinction, in the form of gold medals, silver medals, and honourable mention.

#### THE COLLEGE OF FRANCE.

In this institution, the following courses of instruction on sciences allied to medicine are given, viz., a course of Experimental Medicine, by Dr. Brown-Séquard—lately conducted by M. Claude Bernard; and a course of General Anatomy, by M. Ranvier. The Histological Laboratory is under the direction of M. Ranvier, and is specially intended for the use of persons desirous of making original researches. The Physiological Laboratory, directed by Professor Marey, is open to persons who enter their names for the purpose with the secretary of the Faculty of Sciences, and who have a sufficient knowledge of physiology to enable them to undertake experimental research. The researches may have reference to any department of physiology; but special attention is paid in this laboratory to the phenomena of motion, and their registration by suitable apparatus.

#### FREE MEDICAL INSTRUCTION.

In addition to the professors in the Faculty of Medicine, there are a number of lecturers who are authorised to give instruction in the École Pratique of the Faculty. Among them are: Drs. Berger, Bourgeret, Debove, Dieulafoy, Hallopeau, Huchard, Labadie-Lagrave, Quinquaud, Straus, Troisier, etc. (internal pathology or medicine); Budin, Chéron, Migon, Pinard (obstetrics and gynaecology); Desmarres, Galezowski (diseases of the eye); Delefosse, Durant - Fardel, Lucas - Championnière, Picard, Reliquet (diseases of the urinary organs); Onimus, Vigouroux (electro-therapeutics); Fort (anatomy), etc.

#### THE HOSPITALS OF PARIS.

Pupils of the Faculty of Medicine in Paris attend, without payment, the practice of any of the hospitals which they may select. The visits of the physicians and surgeons are generally made at an early hour—8 or 9 A.M. The following is a list of these institutions:

*Hôtel Dieu*, Parvis Nôtre Dame.—416 beds; The hospital possesses laboratories for histology, and for chemistry and physiology; also a library for the use of the *internes*.

*Hôpital des Cliniques*, 21, Place de l'École de Médecine.—159 beds. Students are only admitted to the obstetric department of this hospital when provided with a card, which is obtained from the Secretary of the Faculty of Medicine, after passing the second examination for the doctorate.

*Hôpital de la Charité*, 47, Rue Jacob.—504 beds. The library of this hospital contains a large number of works in anatomy, physiology, medicine, and surgery, including numerous theses.

*Hôpital de la Pitié*, 1, Rue Lacépède.—709 beds.  
*Hôpital Lariboisière*, Rue Ambroise Paré.—634 beds. Besides the ordinary clinical instruction, instruction is also given in ophthalmic surgery and diseases of the larynx.

*Hôpital Saint-Antoine*, Rue de Faubourg Saint-Antoine.—594 beds.

*Hôpital Necker*, 151 Rue de Sèvres.—418 beds. The Civile museum, containing numerous calculi and specimens of diseases of the urinary organs, is attached to the hospital.

*Hôpital Beaujon*, 208, Faubourg Saint-Honoré.—416 beds. The hospital possesses a library containing 200 volumes, and a large number of theses.

*Hôpital Cochin*, 17, Faubourg Saint-Jacques; 200 beds. An obstetric department is attached to this hospital; but only a limited number of students are admitted to the morning visit.

*Hospice de la Salpêtrière*, Boulevard de l'Hôpital.—3,069 beds for old persons, and 662 for female lunatics. There is a medical library, founded and supported by the *internes*; it contains more than 1,500 volumes. M. Charcot, one of the physicians, gives a course of instruction on diseases of the nervous system.

*Hospice de Bicêtre*.—1,794 beds for old persons, and 540 for male lunatics. There is also a small accident ward of ten beds. The library, which was founded in 1865, contains about 2,000 volumes.

*Hôpital des Enfants Malades*, 149 Rue de Sèvres.—518 beds. There are wards for acute and chronic diseases, small-pox, and diseases of the eye.

*Hôpital Sainte-Eugénie*, 89, Rue de Charenton.—346 beds.

*Hôpital Saint-Louis*, 40, Rue Bichat.—823 beds; of which 637 are occupied with cases of skin-disease, 28 with obstetric cases, and the rest with surgical cases. General Medicine is not taught in this hospital, but there are ample means for the special study of diseases of the skin, on which courses of theoretical and practical lectures are delivered. A museum containing several hundred models and drawings illustrating diseases of the skin; to which is added M. Fournier's collection of illustrations of venereal diseases. The hospital is also rich in surgical cases.

*Hôpital du Midi*, 115, Boulevard de Port-Royal.—336 beds, devoted exclusively to the reception of cases of venereal disease.

*Hôpital de Lourcine*, 111, Rue de Lourcine.—243 beds. Students are admitted to this hospital by special ticket.

The *Hôpital Ménilmontant*, recently erected, contains 635 beds (including 48 for children), distributed as follows: medical, adults, 336; children, 20; surgical, adults, 183; children, 12; maternity, adults, 16; children, 16; small-pox, 30. Besides these, 193 beds can be added in cases of epidemics, etc.

The *Maison d'Accouchement*, 123, Boulevard de Port-Royal, contains 316 beds. This hospital is employed exclusively for the education of midwives, and is not open to students of medicine. Attached to the hospital is a school for midwives.

#### HOSPITAL APPOINTMENTS IN PARIS: CONCOURS.

The following notes on hospital appointments in Paris are abridged from an article in *Le Progrès Médical*.

All the medical appointments in the hospitals of Paris are obtained by *concours*; and, when vacant, are eagerly competed for, not so much on account of the moderate material advantages which they offer,

as for the great scientific resources which they assure to those who obtain them.

Each medical service is under the direction of a physician, and comprises also an *interne* and three or four *externes*. The organisation of the surgical departments is similar; but the number of pupils is greater, and there are generally two or three *internes* and five or six *externes*. In addition, each service has an *interne en pharmacie*; and each hospital possesses a chief *pharmacien* or dispenser.

The chief of the medical staff, physician or surgeon, receives annually a salary of 1,200 francs (48*l.*) in the central hospitals, and 1,500 francs (60*l.*) in the more distant ones. This would be an inadequate compensation for the time spent in the hospitals, were it not supplemented by the professional reputation gained, and by the opportunities of studying the pathology and treatment of disease more completely than can be done in private practice. The physicians retire from hospital duty at the age of 65, and the surgeons at 63. When first nominated, they have to attend the consultations at the central bureau, and to do duty for any of the hospital physicians or surgeons that may be absent. As vacancies occur in the hospitals, they receive appointments in the order of their nomination.

The *internes* and *externes* are nominated by *concours* for four years, and receive 500 francs *per annum* for the first two years, 600 francs the third year, and 700 francs the fourth year. Some of them are also provided with lodging, fire, and light; others receive 400 francs yearly in lieu of lodging.

The *interne* is the most direct assistant of the hospital physician or surgeon; he accompanies him in his morning visit, and himself visits the patients in the evening. The *internes* remain on duty in turn, to attend to urgent accidents and cases of illness. Beyond this, it is their interest to remain as much as possible in the hospital, in order to be able to avail themselves of the opportunities of clinical instruction which it affords. In order to increase their means of professional improvement, the *internes* of several of the hospitals have formed libraries, which are increased by voluntary donations and other means—some of them receiving grants from the municipal council.

In November, the *internes* are invited to compete for prizes. To those of the first and second years are offered a silver medal, books, and two certificates of honour. Those of the third and fourth years compete for a gold medal, a silver medal, and two certificates of honour. The successful candidate for the gold medal is entitled to two additional years of *internat*. The number of competitors is usually not small; it is not, however, to be inferred from this that the *internes* do not work.

Those candidates who are placed in the first list at the *concours* but do not succeed in getting appointments, are termed provisional *internes*, and fill the places of those who are absent. They have, however, to compete again at the end of the year if they desire to receive appointments.

The *externes*, who are appointed for three years, have to take records of cases, either alone or under the direction of the *internes*, to assist the latter in dressing difficult cases, and to dress the minor cases. The *externat*, well employed, is a safe road to the *internat*. At the *concours*, the examiners can easily distinguish the candidates who have profited by their visits to the hospital. The *externes* at the central hospitals are not paid; at those more distant from the centre of the city they receive 300 francs yearly.



The *concours* for the *externat* generally commences early in October and continues until the end of December. Candidates must not be under 18, nor above 25 years of age. They must produce—1. A register of birth; 2. A certificate of vaccination; 3. A certificate of good conduct signed by the mayor of the commune in which the candidate is domiciled; 4. A certificate of at least one inscription in the Faculty of Medicine. The examination consists in—1. An oral description of some subject in descriptive anatomy; 2. A similar description of some elementary subject in pathology or minor surgery. For each five minutes are allowed, after five minutes of reflection. Twenty candidates are examined on each day. The maximum number of marks that can be gained by a candidate is 20 for each examination. The examination is conducted by four physicians and three surgeons of the central bureau, generally from those most recently appointed.

The *concours* for the *internat* takes place nearly at the same time as that for the *externat*. Candidates must not be more than 28 years old, and must produce certificate of having performed the duties of *externe* at least from the first day of the preceding January, without interruption (unless this have been unavoidable); also certificates from the physicians or surgeons and the directors of the hospitals in which they have performed the duties of *externe*, testifying to their punctuality, obedience, and good conduct. The examination commences with a written essay on some subject in anatomy and medical or surgical pathology, for which two hours are allowed. The question is drawn by lot from three chosen by the jury of examiners. The questions this year were—1. The blood-vessels of the lungs, and pulmonary gangrene; 2. The mucous membrane of the tongue, and cancer of that organ; 3. The blood-vessels of the kidney, and symptoms of renal lithiasis. The candidates read their competitions before the examiners, and receive a number of marks, generally varying from 20 to 28 (the maximum being 30). After this, the candidates are classified, and a certain number only (about three for each vacant place) are admitted to the second examination. In this, a question in anatomy and pathology is proposed; ten minutes are allowed for consideration, and ten minutes for the oral answer. The maximum number of marks for this examination is 20. The examiners are selected in the same way as for the *externat*.

At the end of the *concours*, the candidates are classified according to the number of marks; and the 35 or 40 first on the list are nominated *internes*.

The first four candidates on the list are the successful candidates for the prize for *externes*, the examination for which is the same as that for the *internat*. The first receives a case of instruments of the value of 300 *francs*, and has, during his first year, the sum of 800 *francs*, in addition to the payment which he receives in common with the other *internes*. The first and second candidates are also presented with books.

The prizes offered to the *internes* are competed for in the beginning of November. The examination consists in—1. A written composition, for which two hours are allowed, bearing on anatomy, physiology, and pathology; 2. An oral description of some subject in external pathology; 3. A similar description of some subject in internal pathology (for each of these ten minutes are allowed); 4. *Internes* of the third and fourth years must also have sent in, before August 15, an original essay on some subject selected

by them; this is generally based on observations made in the hospital. These essays are often of considerable merit, and are utilised for the graduation theses or published in the Journals. The maxima of marks obtainable are: for the written composition, 30; for the essay, 40; for each oral examination, 20.

The Civile prize, of the value of 1,000 *francs*, is given every second year to the best essay by an *interne* on duty on some point in the pathology of the genito-urinary passages.

The *concours* at the Bureau central for the office of physician consists of five examinations. 1. The candidate gives a lecture for a quarter of an hour on a patient, for whose examination ten minutes are allowed. 2. A lecture of twenty minutes' duration, after twenty minutes' reflection, on some subject in medicine. 3. A written consultation on a medical case; ten minutes being allowed for examining the patient, and three-fourths of an hour for writing out the consultation. To each of those examinations, a maximum of 20 marks is allotted. During these three examinations, a gradual process of elimination takes place, so that at last there remain five candidates for one place, eight for two, and ten for three places. These are then further subjected to the following tests: 1. A written composition, for which three hours are allowed, on some subject in medicine, which must comprise a question in pathological anatomy; 2. A lecture of thirty minutes' duration on two patients, twenty minutes being allowed for examining them. This is the most difficult part of the examination.

In the *concours* for the office of surgeon, the examinations are nearly the same; there is in addition, an examination in operative surgery, and the candidate has to lecture on one subject instead of two. The number of candidates is generally much smaller than that for the office of physician, and the elimination does not commence until after the third examination.

It is very rarely that a candidate is successful before his third or fourth *concours*; and there are instances in which very distinguished hospital medical officers have had to compete ten or twelve times.

#### MEDICAL EDUCATION IN THE PROVINCES.

The institutions in which medical education is given elsewhere than in Paris belong to three classes: 1. Faculties of Medicine, possessing the power to grant degrees; 2. *Ecoles de plein exercice*, where a full course of instruction is given, but where degrees are not granted; 3. Secondary or preparatory schools. The following are the conditions laid down by the French Government for the recognition of a Faculty of Medicine.

The city in which the school is established must pay a proper share of the expenses. There must be seventeen professorships; viz., Anatomy, Physiology, Internal Pathology (Medicine), General Pathology and Pathological Anatomy, Hygiene and Forensic Medicine, Operative Surgery, Therapeutics, Materia Medica, Botany and Zoology, Medical Chemistry, Medical Physics, Pharmacy and Clinical Midwifery—each with one professor; and two professors each of Clinical Medicine and Clinical Surgery. There must also be eight assistant-professors; two each for the natural sciences, medicine, and surgery, and one each for obstetrics and for anatomy and physiology. These assistants are selected by *concours* and appointed for ten years.

*Faculty of Medicine of Montpellier.*—Instruction is given in all the ordinary branches of medical education and in several special subjects; and there are laboratories of pathology and histology, physiology, chemistry, physics, legal medicine, and therapeutics. Clinical instruction is given at the General Hospital and the Hospital Saint-Eloi. A prize of 500 francs is given yearly to the author of the best thesis. The library, the anatomical museum, the botanical jardin and the *conservatoire botanique*.

*Faculty of Medicine of Nancy.*—Clinical instruction is given at the Hospitals Saint-Charles (Medicine and Ophthalmology), Saint-Léon (Surgery), and Saint-Julien (old persons); and at the Maison de Secours (obstetrics and gynaecology, and syphilitic and cutaneous diseases). There are laboratories of physiological and pathological chemistry, physiology, pathology and pathological anatomy, and normal histology. Prizes are awarded at the end of each year of study, and there is a special prize for *internes*.

*Faculty of Medicine and Pharmacy of Lyons.*—In this Faculty there are professorships of Anatomy, Physiology, General Anatomy and Histology, Pathological Anatomy, Comparative and Experimental Medicine, Medical and Pharmaceutical Chemistry, Medical Physics, Natural History, Pharmacy, Internal Pathology (Medicine), External Pathology (Surgical), General Pathology and Therapeutics, Hygiene, Therapeutics, Materia Medica, Jurisprudence and Toxicology, Operative Surgery, Clinical Medicine, Clinical Surgery, Clinical Obstetrics, Clinical Ophthalmology, Skin Diseases and Syphilis, Mental Diseases. There are also supplementary courses of Diseases of Women (Clinical), Diseases of Children (Clinical), Surgical Diseases of Children (Clinical), Accouchements, Diseases of the Skin (and Syphilis, and Medicine. There are also a number of Assistant Professors (*agrégés*) for the various subjects. Clinical instruction is given at Hôtel-Dieu (about 1,000 beds) in Medicine, Surgery, and Diseases of the Eye; at the Charité Hospital (about 800 beds) in Obstetrics, and Diseases of Women and Children; at the Antiquaille, in Diseases of the Skin and Syphilis; and in Mental Diseases at the Hospice de Bron, which contains 1,000 patients. Besides these hospitals, the Hôpital de la Croix Rousse, containing about 400 beds—although, in consequence of the distance, not attached to the Faculty—is available for clinical instruction; most of its medical staff being professors or *agrégés* in the Faculty. There is also a convalescent hospital at Longchêne, containing 100 beds. There are laboratories for the study of Anatomy and Operative Surgery, Physiology, Pathological Anatomy, Experimental and Comparative Medicine, Medical and Pharmaceutical Chemistry, Medical Physics, Natural History, and Pharmacy. They are open to the students.

OTHER PROVINCIAL MEDICAL SCHOOLS.—The *écoles de plein exercice* are at Nantes, Marseilles, Bordeaux, and Toulouse. (It was in contemplation some time ago to form the latter into a Faculty of Medicine). There are secondary schools in Rennes, Angers, Poitiers, Arras, Besançon, Limoges, Clermont, and other towns.

## MEDICAL DEGREES IN GERMANY.

In the German empire there are twenty Universities which possess a Medical Faculty and grant degrees in Medicine; viz., those of Berlin, Bonn, Breslau, Erlangen, Freiburg im Breisgau, Giessen, Göttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Rostock, Strasburg, Tübingen, and Würzburg.

The following comments on medical organisation in Germany are abridged from an able article in the *American Journal of the Medical Sciences* for July 1878.

"The peculiarities of the medical institutions of Germany are largely due to the fact that, in the latter part of the seventeenth century, the Government established a network of medical officials over the country, and organised its own boards of examination for those who desire to become practising physicians, which boards were independent of the universities. This system was intended to secure the best medical talent for the service of the government, but the result was not very satisfactory, and it was found difficult to obtain a sufficient supply of skilled medical men for the military service; and in Austria, Saxony, Prussia, and Russia, schools were established at the end of the eighteenth century for the purpose of educating army-surgeons.

"In the formation of these German military medical schools, as well as the similar establishment at St. Petersburg, the first idea of the Government seems to have been that the civil schools were deficient either in number or capacity. Moreover, they seem to have thought that they could retain physicians after they had got them educated.

"Neither of these theories was correct, for the foundation of the difficulty lay in the fact that the position of the army-surgeon on duty with a regiment was an inferior one, and distasteful to educated gentlemen. The army-officer looked down with quiet contempt and condescension on men who were non-combatants, and knew nothing of military tactics; and, as these positions of medical officers had for a long time been filled by men of the lowest class, it had been found possible to treat them as servants and appendages. Even at the present day, so persistent are traditions and customs in military matters, the majority of men trained in a military academy, when they come to realise the sweets of command, find it difficult to realise that a thoroughly trained physician is their equal, though, in fact, in general education, he is often their superior.

"Under the laws relating to State examinations and the central medical board, as no one could practise who had not passed the State examination, it was found necessary to provide for the wants of the poorer districts by authorising an inferior grade of practitioners, who were examined mainly in surgery and obstetrics, and who corresponded in most respects to the *officier de santé* of France. Since the consolidation of the empire all this has been changed. At the present time any one can practise medicine in Germany without a diploma and without an examination, and the inferior legal class of practitioners is done away with. But no one may call himself, or allow himself to be called, physician (*Arzt*) unless he has passed the State examination, nor doctor unless he has obtained that title by the



University examination; and these two titles are sharply separated. The doctor is not a physician (*Arzt*) unless he has passed the State board, and the *Arzt* is not a doctor unless he has passed the Faculty board. The man who is neither *Arzt* nor doctor practises at his peril; for, though he is not forbidden to do so, yet, if any mishap occurs from his ignorance, he is punished not only by fine, but by imprisonment for a period varying from six months to ten years.

"The expenses of passing the State board are less than half those for the Faculty, and the examination is more exclusively practical; hence it is selected by the poorer students who seek only a rural practice.

"The majority of students pass both examinations, and this is especially necessary for those who aspire to any medical office.

"The preliminary examination is known as the *tentamen physicum*, and the same preliminary certificates are required as in Austria. It includes anatomy, physiology, chemistry, physics, botany, zoology, and mineralogy, and is usually passed at the end of the second year of university life. The State examination is divided into four parts, corresponding in all essential points to the Austrian *rigorosa*. In the examination in practical medicine and surgery, the candidate has to treat two or three cases in each branch for about a week, and to present a written account of these cases. A thesis for graduation is demanded in Germany, though not always printed.

"The number and character of professorial chairs in the medical faculties vary greatly in the different universities, but in all we find three classes of teachers, viz.: professors, extraordinary or assistant professors, and *privat-docents*.

"Thus, at Berlin, there are 14 professors, 14 assistants, and 37 *privat-docents*, with about 260 students; Kiel, the smallest university, with 55 students, has seven professors and seven *privat-docents*.

"The professors are appointed for life, and at the end of thirty years' service can retire on a pension; they receive a fixed salary from the State or university—a part of the revenue derived by the medical faculty from certain fees, and their lecture fees from the students. The fixed salary is occasionally increased according to the success and reputation of the professor. Any doctor in medicine may be a candidate for a vacant chair, the selection being made by the minister of public instruction from a list of names recommended by the Faculty.

"The extraordinary or assistant professors are appointed in like manner from among the *privat-docents*. As a rule, their compensation comes only from students' fees, but occasionally a small fixed salary is allowed.

"The position of *privat-docent* is accessible to all doctors of medicine, and the number is unlimited. Their compensation is from students' fees, and they may not underbid the regular professor. At some universities they are furnished with rooms, and given a share of the clinics; at others, they receive little or no assistance.

"There are no independent schools in Germany. No one can open a course on his own responsibility, and the universities alone have the power to confer academic grades. The system of *privat-docents*, however, compensates in a great measure for this want of freedom. As the test of fitness for a degree in the university, or for the position of practitioner

in the State, is, mainly, the ability to pass certain examinations, and as the salaries of the professors are guaranteed by the State, it is evident that it makes little difference as to precisely when, where, or how the student gets his information, provided only that he really gets it.

"There is, therefore, little objection to free, or, as it is sometimes called, 'extramural teaching,' and hence young men of ability can establish themselves as private teachers, demonstrators, etc., in the immediate vicinity of the universities, relying on their own talents and tact to secure pupils. These are the *privat-docents*, much of whose teaching consists in giving short courses, of from six to eight weeks' duration, on special subjects. These *privat-docents* are subject to certain regulations, and follow in a general way the teaching and directions of the professor of the special branch to which they attach themselves; they are understood to be in training for professorships, and, if they show marked ability as teachers or as investigators, their promotion may be very rapid.

"When a professorship becomes vacant in a German university, it may occasion several changes, especially if the position be an important one, because there immediately follows an effort to induce the best man from some other university to come and fill the vacant place, and, if this be successful, then there is another empty chair to fill, and so on. Of course, counter-inducements are held out by the universities which wish to retain their famous men, and thus a sort of auction follows, in which sometimes the article sold, viz., the professor, can almost dictate his own terms. When we use the words "auction" and "sold", we do not by any means intend to imply that it is purely a matter of money. Social position, orders of nobility, handsome residences, or special facilities for scientific pursuits, are some of the various inducements that may be used.

"For instance, after the transfer of Strasburg to Germany, neither pains nor money was spared to make the university a success. For the chairs of the medical faculty rising men were selected, all of whom were known for original research and had practically proved their ability as teachers and writers. The chair of pathological anatomy was given to Recklinghausen, one of the most brilliant of Virchow's pupils. When the chair of pathological anatomy at Vienna became vacant by the retirement of Rokitansky, it was offered to Recklinghausen, and the salary proposed was 25,000 *francs*, or about three times the usual salary of such a professorship. But the Prussian Government was quite as anxious to retain Professor Recklinghausen as the Austrian Government was to obtain him, and asked him to say what he wanted. His reply was to demand, as the condition on which he would remain, that there should be constructed a large pathological institute, in accordance with his plans, and in connection with the hospital—an institute which will cost several hundred thousand dollars, and will require a change in the fortifications. His demand was acceded to, and he is hard at work now in Strasburg."

#### UNIVERSITY OF BERLIN.\*

THE conditions for promotion to the Doctorate of Medicine, Surgery, and Midwifery, at the Royal Frederick William University at Berlin, are as follows.

\* For much of the information in this and subsequent papers, we are indebted to Dr. Hardwicke's *Guide to European Universities*.

1. Candidates wishing to be admitted to the promotion examination must have studied medicine at least four years in one or more Universities regularly constituted. Universities and Medical Colleges abroad are deemed equivalent to the Universities in Germany.

2. Candidates under 30 years of age who have not matriculated at this University, or who have left previously to their application for promotion, must matriculate again. This can be done free of cost. Both these and matriculated students of this University must, before making application for promotion, take out a preliminary certificate of having left, and will not receive the real certificate until after promotion.

3. The candidate has to make application to the Dean, handing in at the same time the documents mentioned under 1 and 2. He has then to pass a written and verbal preliminary examination before the Dean, to show his capacity, before being admitted to the *examen rigorosum* before the Faculty. The verbal examination is generally conducted in the German or Latin language, and extends, according to the judgment of the Dean, to all branches of theoretical and practical medicine. At the written examination, an *ex tempore* essay must be written, without any assistance, in a given time. According to the result of the preliminary examination, the Dean will or will not permit the candidate to be admitted to the *examen rigorosum*.

4. After the preliminary examination, the Dean will lay before the Faculty the documents having reference to the personality and the course of studies of the candidate, the judgment respecting the preliminary examination, and the essay composed thereat. Should that body decide for admission, the Dean will appoint as early a time as possible for the *examen rigorosum*. There are no fixed times for this examination; but, as a rule, there are no examinations held during the fairs in April, August, September, and October.

5. The *examen rigorosum* takes place before six members of the Faculty, is verbal only, and is concluded at one sitting, each of the examiners examining the candidate for a quarter of an hour. No branch of theoretical and practical medicine and surgery is excluded from the examination. It is generally held in German, but, if necessary, in Latin. From this examination no candidate can be exempted. If he be rejected, six months must elapse before re-admission.

6. After this, the candidate must present a German or Latin dissertation, to be criticised by the Faculty. The members of the Faculty are ready to advise the candidate as to the choice of a subject for his essay, and the working up of it, but the essay must be entirely original; and the candidate must declare on oath in writing that he has composed it entirely himself, without any aid from others. If the manuscript be pronounced good by the Faculty, the candidate will have to get printed, at his own expense, by a certain printer, a prescribed number of copies. It must consist of at least two quires, and give evidence of a good scientific knowledge. To this must be annexed a brief "*curriculum vitæ*," and at least three theses approved by the Dean.

7. After this, follows the public discussion in the Aula of the University, which is immediately connected with the solemn act of promotion. The discussion has reference both to the dissertation and to the theses. Next, the opponents chosen by the candidate, who must be at least three in number, divide

on the subject. Their names must appear on the title page of the dissertation. Afterwards, any one belonging to the University is at liberty (*e coronâ*) to oppose. Both the candidate and the opponents must be dressed in black on this occasion. The discussion will be either in German or in Latin. The Minister of educational affairs has the privilege of allowing the use of another language, and also of dispensing with the discussion.

8. After the discussion is ended, the oath-taking and promotion of the candidate as a Doctor of Medicine, Surgery, and Midwifery takes place, conducted by the Dean or his representatives. After the ceremony of promotion is completed, the Dean delivers the diploma to the newly created doctor, who inscribes his name in the book of the Faculty. The expense of making out the diploma (15 marks) is borne by the candidate. A copy of it is fixed on the black board of the Faculty, and a certain number of copies are delivered to the Registrar of the University, for distribution. Promotion *in absentia* can on no account take place.

9. Four hundred and forty *reichsmarks* must be paid to the Dean as fees for the degree of Doctors in Medicine, of which 221 marks must be paid on application, and are forfeited after the *examen rigorosum*, if the candidate be unsuccessful. The second portion (204 marks for the Faculty and 15 marks for the University library) may be paid either at the same time with the other or within the period between the *examen rigorosum* and the promotion. In addition to this, the candidate has to pay expenses of printing the dissertation and diploma (*vide* 6 and 8).

10. The shortest time in which the whole of the proceedings for obtaining a doctor's degree can be gone through is ten days. In this case, however, it is stipulated that the dissertation be delivered ready for printing to the Dean at the first application, and that the other business of the Faculty permits them to proceed at once to the examinations. As a rule, such a rapid succession of all the proceedings cannot be depended upon.

The Medical Faculty of this University consists of the following professors, with between forty and fifty *doctents* or private teachers. *Ordinary Professors*: B. von Langenbeck, Surgery and Clinical Surgery; K. B. Reichert, Anatomy; A. Bardeleben, Surgery and Clinical Surgery; R. Virchow, Pathology; F. T. Frerichs, Medicine and Clinical Medicine; E. Du Bois-Reymond, Physiology; A. Hirsch, Medicine and Epidemiology; E. Leyden, Medicine and Clinical Medicine; C. Schröder and A. Gusserow, Obstetrics and Gynaecology; O. Liebreich, Materia Medica and Chemistry; C. Schweigger, Diseases of the Eye and Ophthalmic Clinic; C. Westphal, Psychology and Psychiatric Clinic. *Extraordinary Professors*: E. Hensch, Diseases of Children; E. Gurlt, Practical Surgery; C. Liman, Forensic Medicine; C. Skrzeczka, Hygiene; J. Meyer, Medicine; R. Hartmann, Anatomy; G. Lewin, Dermatology and Syphilology; H. Jacobson, Medicine; E. Albrecht, Dental Surgery; H. Munk, Physiology; L. Waldenburg, Physical Diagnosis; A. Lucae, Aural Surgery; E. Salkowski, Chemistry; G. Fritsch, Physiology; O. Fräntzel, Medicine, H. Senator, Diseases of Children; F. Busch, Surgery; H. Kroneker, Physiology; —. Fasbender, Gynaecology. The following professors also give instruction in subjects connected with medicine in the Philosophical Faculty; *Ordinary Professors*: —. Schwendener, Botany; H. Helmholtz, Physics; W.



Peters, Zoology; A. W. Hofman, Chemistry; *Extraordinary Professors*: F. L. Sonnenschein, Chemistry; A. Garcke, Botany; L. Kuy, Botany; P. Ascherson, Botany; E. von Martens, Zoology.

The institutions for Clinical treating connected with the University are: Professor von Langenbeck's Clinic for Surgery and Ophthalmic Surgery; the University Polyclinic; the Ophthalmic Polyclinic (Dr. Schweigger); the Obstetric Clinic; and in the Charité Hospital, the Medical Clinic (Dr. Frerichs), the Clinic for Elementary Medical Instruction (Dr. Leyden), the Surgical Clinic (Dr. Bardeleben), the Ophthalmic Clinic (Dr. Schweigger), the obstetric clinic, and the clinics for diseases of the skin and syphilis, for diseases of children, and for diseases of the mind and nervous system. The pathological institute is under the direction of Professor Virchow; the physiological laboratory under that of Professor Du Bois-Reymond; and the chemical laboratory under that of Professor Hofmann. The Pathological Institute, which owes its existence in its present form to Professor Virchow, and has served as the model for numerous similar institutions in Germany and elsewhere, is situated within the grounds of the Charité Hospital. It contains a lecture-theatre, a room for demonstrations, a museum, a chemical laboratory, a histological laboratory, a suite of rooms for the *post mortem* examinations, private rooms for the professor and his assistants, while in the basement floor there are kept animals for experiment.

#### UNIVERSITY OF BONN.

A DEGREE in Medicine, Surgery, and Midwifery, is granted only under the following conditions, viz.:

1. An examination in all branches of medicine and surgery, of about three hours' duration, in the German language.
2. A written scientific dissertation in German or Latin.
3. Public defence of the dissertation in German or Latin.
4. Fee for the examination and diploma, 360 marks (£18), which must be paid prior to examination.

The following are the Professors in the Medical Faculty of this University. *Ordinary Professors*: C. Binz, *Materia Medica*; W. Busch, Surgery; C. Köster, Pathology; Baron A. von La Valette St. George, Anatomy and Histology; F. von Leydig, Comparative Anatomy; E. Pflüger, Physiology; H. Rühle, Medicine; T. Sämisch, Diseases of the Eye; G. Veit, Gynaecology and Forensic Medicine. *Extraordinary Professors*: J. Doutrelepon, Surgery; C. von Mosengeil, Surgery; F. Obernier, Diseases of Children; H. Schaaffhausen, Anatomy and Histology; N. Zuntz, Anatomy and Histology. Instruction is also given in the Philosophical Faculty—*Ordinary Professors*: F. H. Troschel, Zoology; J. Hanstein, Botany; and A. Kekulé, Chemistry.

Connected with the University are medical, surgical, obstetric, and ophthalmic clinics; and anatomical, physiological, pathological, pharmacological, and chemical institutes.

In the winter session, 1877-78, 126 students attended the Medical Faculty of this University; and 154 in the summer session of this year.

#### UNIVERSITY OF Breslau.

THE following Professors belong to the Medical Faculty of this University. *Ordinary Professors*: A. Biermer, Medicine; E. Ponfick, Pathology; H. Fisher, Surgery; N. Förster, Ophthalmology; H. Häser, *Materia Medica* and Therapeutics; C. Hasse, Anatomy; R. P. H. Heidenhain, Physiology; O. Siegelberg, Obstetrics and Gynaecology. *Extraordinary Professors*: L. Auerbach, Comparative Anatomy; H. Cohn, Ophthalmology; W. A. Freund, Gynaecology; H. Frieberg, Forensic Medicine and Public Health; R. Gscheidlen, Physiology and Physiological Chemistry; K. I. Klopsch, Surgery; O. Simon, Diseases of the Skin and Syphilis; H. Neumann, Psychological Medicine; E. Richter, Surgery; R. Voltolini, Diseases of the Ear; L. Hirt, Hygiene; — Sommerbrodt; — Berger. There are also about fifteen private teachers. Instruction is also given in the Philosophical Faculty on subjects connected with medicine by—*Ordinary Professors*: C. J. Löwig, Chemistry; H. R. Göppert, Pharmacology; A. E. Grube, Zoology; T. Poleck, Chemistry in the Pharmaceutical, Forensic, and Hygienic Applications; F. Cohn, Botany.

The number of students attending the Medical Faculty of this University in 1877-78 was 168, and in the last summer session 178.

#### UNIVERSITY OF ERLANGEN.

THE following are the regulations to be observed by candidates for the degree of Doctor of Medicine in this University.

1. Candidates for the degree of Doctor must announce their intention to the Dean of the Faculty of Medicine, and present the following documents: *a*. Evidence of having gone through the curriculum in a German gymnasium, or proof of equivalent general education; *b*. Proof of having studied medicine in one of the German Universities, or in a corresponding medical school abroad, during at least three years; *c*. A Thesis, composed by the candidate, on some subject in medicine or natural science, with a written declaration, on word of honour, that the work is absolutely the candidate's own.

2. The dissertation is examined by a referee, appointed by the dean; and, if it be judged to be of sufficient merit, the candidate is admitted to an oral examination, which is conducted in the German language. It may take place in two forms; *a*. As a colloquium, in the case of those who have passed an examination in medicine before a German examining board; *b*. As an extended examination on all departments of medical science, in the case of those who have not passed such an examination. The colloquium takes place under the presidency of the dean before three delegates of the Faculty; the detailed examination is conducted by the dean and four other members of the Faculty. The latter examination is held in public, and is in German.

3. After the conclusion of the oral examination, the examiners decide on the result. If the decision be favourable, the degree of Doctor is at once conferred, the fact being communicated to the candidate by the dean, and his diploma issued to him.

4. The candidate, if his dissertation be approved, must have it printed at his own expense. At the back of the title-page it must be stated that the dissertation is printed with the consent of the Faculty; and the name of the reporter (*referent*) must be given.

5. The candidate must pay a fee of 300 marks (equal to about 15*l.* 10*s.*) for the granting of the Doctor's degree, and must also deliver 150 copies of his dissertation to the Faculty.

6. If the candidate fail to pass the examination, half of the fee is returned to him.

The Medical Faculty of this University consists of the following professors and teachers. *Ordinary Professors*: J. Gerlach, Anatomy; F. A. Zenker, Pathology; W. Heineke, Surgery; I. Rosenthal, Physiology; W. O. Leube, Medicine; J. Michel, Ophthalmology; P. Zweifel, Midwifery. *Extraordinary Professors*: H. Trott, Materia Medica; A. Wintrich, Medicine; F. W. Hagen, Psychological Medicine; W. Filehne, Materia Medica and Therapeutics. Instruction in subjects connected with medicine is also given in the Philosophical Faculty. *Ordinary Professors*: E. von Gorup-Besanez, Chemistry; M. Reess, Botany; A. Hilger, Pharmacy and Chemistry.

In connection with the University are the following institutions: the University Hospital, with medical, surgical, obstetric, psychiatric, and ophthalmic clinics; an anatomical, a physiological, and a pathological institute.

The number of students in the Faculty of Medicine during the session 1877-78 was 110; and during the summer session 1878, 96.

#### UNIVERSITY OF FREIBURG.

THE Faculty of Medicine here grants a degree in Medicine, Surgery, and Midwifery. The following are the conditions to be observed before being admitted to examination.

1. A certificate must be produced showing the respectability of the candidate, and also the amount of his education, both prior to and since his admission as a medical student.

2. A scientific dissertation must be handed to the Dean, written in German or Latin.

3. A fee of 300 marks (£15) must be paid to the Chief Beadle. In case of rejection, the candidate will receive half the fee back; and when he presents himself for examination again, he pays only that amount, viz., 150 marks.

Should these conditions be complied with, and the thesis be deemed satisfactory, the candidate will be admitted to a *viva voce* examination in the German language.

The following are the subjects of examination: Anatomy, Materia Medica and Toxicology, Physiology, Medicine, Surgery, Pathological Anatomy, Midwifery, Ophthalmology.

If a candidate have already passed an examination as Physician before a German commission of examiners, the number of subjects may be reduced.

If the examination be passed, one of the following grades of honour is conferred: 1. *Summâ cum laude*; 2. *Insigni cum laude*; 3. *Cum laude*.

The Medical Faculty of the University is thus constituted. *Ordinary Professors*: A. Ecker, Human and Comparative Anatomy; L. von Babo, Chemistry; O. Funke, Physiology; R. Maier, Pathological Anatomy and State Medicine; A. Hegar, Midwifery; F. Hildebrand, Botany; W. Manz, Ophthalmology; Ch. Bäumler, Materia Medica and Medicine; G. F. L. Thomas, Materia Medica and Medicine; H. Maas, Surgery. *Extraordinary Professors*: A. Schinzinger, Surgery; R. Kaltenbach,

Midwifery; J. Latschenberger, Physiology; R. Wiedersheim, Anatomy and Histology. There are also several *privat-docents*.—In the Philosophical Faculty, lectures on subjects connected with medicine are given by Professors A. Weismann in Zoology, and A. Claus in Chemistry.

The University library contains 250,000 volumes. There are a chemical laboratory and institutions for the practical study of anatomy, pathology, physiology, etc.; and medical, surgical, obstetric, and ophthalmic clinics.

The number of medical students attending the University in the winter session 1877-78 was 147.

#### UNIVERSITY OF GIESSEN.

THE Faculty of Medicine grants a degree in Medicine, Surgery, and Obstetrics, which can only be obtained on the following conditions.

1. A *curriculum vitæ*, written by himself, must be sent to the Faculty by the candidate; also a certificate of gymnasial maturity, and a certificate of at least three years' medical and surgical study at an University or a Medical Institution. If the candidate be not a native of Germany, he must produce a certificate of sufficient preliminary studies from his own country in place of the gymnasial maturity certificate (a degree in arts or certificate of having passed the matriculation examination for medical students at any recognised University is sufficient).

2. The candidate must present a dissertation on some medical subject, written in German or Latin, together with a declaration in his own handwriting that he has composed the dissertation himself, without help from others, except what may be stated by him. In place of the dissertation, a previously published treatise or literary production may be substituted.

3. In case of admission by the Faculty, the whole of the documents are laid before the Rector and the Chancellor, who may object to the admission if they be not satisfied.

4. If no objection be made by the Rector and Chancellor, and the candidate have paid the promotion fees to the Quæstor of the University, the dissertation is to be judged by a Referee. If the Referee declare the work to be unsatisfactory, the candidate is rejected. In the contrary case, he is admitted to *viva voce* examination before the Faculty.

5. The *viva voce* examination takes place in the German language, and lasts two or three hours.

6. The verbal examination embraces the following subjects: Anatomy, Physiology, Pathological Anatomy, Histology, Pathology and Medicine, Materia Medica and Therapeutics (including Toxicology), Surgical Pathology and Surgery, Forensic Medicine, Obstetrics.

7. Immediately after the conclusion of the examination, the result is decided on by the President and examiners in a private sitting, and at once made known to the candidate by the President. The examination is not passed when two or more members of the Faculty declare the result of the examination to have been unsatisfactory. The kind of degree to be granted is decided by a majority of votes—whether “*cum laude*,” “*magnâ cum laude*,” or “*summâ cum laude*”.

8. The approved dissertation must be printed and published, and the appointed number be presented to the Faculty before the promotion take place. Exception is made when the candidate has already handed in a printed treatise.



9. Promotions to the M.D. *in absentia* do not take place at this University, except in the case of degrees granted *honoris causa* by the unanimous decision of the Faculty, to men who have rendered some great service to the science of medicine.

10. The fee for promotion is 440 marks (£22), which must be paid to the Quæstor of the University at the time of the petition for admission. If the dissertation be not considered satisfactory, and the candidate in consequence be not admitted to the verbal examination, 100 marks are retained by the Faculty, and the rest returned to the candidate. If the verbal examination be not passed, then half the fees are forfeited; but, if the candidate present himself again, in this case he has only to pay half the fees.

11. At the end of the year, the Rector for the time being has to publish in the Hessian Grand Ducal Government Newspaper, and in some other national newspaper chosen by the University, the promotions that have taken place during his rectorship, with the position in life of those promoted.

The following are the professors in the Faculty of Medicine in this University. *Ordinary Professors*: — Bose, Surgery; J. Wilbrand, Forensic Medicine and Hygiene; R. Buchheim, Materia Medica; C. Eckhard, Physiology; G. Pflug, Medicine; F. Kehrer, Obstetrics and Gynæcology; M. Perls, Pathology; — Sattler, Ophthalmology. There are also three *docents*. In the Philosophical Faculty, subjects connected with medicine are taught by *Ordinary Professors*: H. Will, Chemistry; H. Hoffmann, Botany; A. Schneider, Zoology; *Extraordinary Professors*: A. Naumann, Chemistry; A. Laubenheimer, Chemistry.

The University Library contains 140,000 volumes. There are an academical hospital, a lying-in institution, a chemical laboratory, a physiological and a pathological institute.

#### UNIVERSITY OF GÖTTINGEN.

A DEGREE in Medicine, Surgery, and Obstetrics is granted under the following conditions.

1. A written essay must be sent in on any medical subject chosen by the candidate, on the result of which depends the entrance to the examination.

2. If the essay be considered satisfactory, the student is admitted to a *viva voce* examination, which lasts a few hours, and is always held in German or Latin, at the option of the candidate.

3. A fee of 439 marks (£21 19s.) must be paid to the Medical Faculty prior to examination.

4. The subjects of examination are Anatomy and Morbid Anatomy, Physiology, Pharmacology, General Pathology and Medicine, Surgical Pathology and Surgery, Toxicology, Medical Jurisprudence, and Obstetrics.

If the candidate be successful he receives a diploma, and promises to hold his academical honour with dignity.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors*: F. Wöhler, Chemistry; W. Baum, Surgery; J. Henle, Anatomy; C. E. Hasse, Medicine; G. Meissner, Physiology; H. Schwartz, Midwifery and Diseases of Women; L. Meyer, Psychological Medicine; Th. Leber, Ophthalmology; W. Ebstein, Medicine; W. Marmé, Materia Medica; F. König, Surgery; — Orth, Pathology; H. Eich-

horst, Medicine. *Extraordinary Professors*: W. Himly, Physiology and Forensic Medicine; E. F. W. Herbst, Physiology; A. Krämer, Medicine, and Diseases of the Skin and Syphilis; W. Krause, Forensic Medicine; C. F. Lohmeyer, Surgery; T. Husemann, Materia Medica and Toxicology. In the Philosophical Faculty, instruction is given by—*Professors*: A. Grisebach, Botany; F. Ehlers, Zoology; H. Hübner, Chemistry. *Extraordinary Professors*: H. A. L. Wiggers, Pharmacy; C. Boedecker, Physiological Chemistry; L. von Usilar, Organic and Pharmaceutical Chemistry.

The following institutions are connected with the Medical Faculty; institutions for teaching animal and vegetable physiology, and pharmacology, and pathology; the Ernst-August hospital; a lying-in hospital; a psychiatric clinic in the Lunatic Asylum; a chemical laboratory; and a veterinary institute.

The number of students attending the Faculty of Medicine in 1877-78 was 115; and in the summer session of 1878, 114.

#### UNIVERSITY OF GREIFSWALD.

THE Medical Faculty of this University consists of the following professors and teachers. *Ordinary Professors*: J. Budge, Anatomy; H. C. A. Pernice, Midwifery and Diseases of Women and Children; F. Grohé, Pathological Anatomy; F. Mosler, Pathology and Therapeutics; C. Hüter, Surgery; L. Landois, Physiology; R. Schirmer, Ophthalmic Surgery; A. Eulenberg, Materia Medica. *Extraordinary Professors*: C. Eichstedt, Midwifery, and Diseases of the Skin and Syphilis; W. Häckermann, Forensic Medicine and Hygiene; R. Arndt, Psychology and Nervous Diseases; P. Vogt, Surgery; — Krabler. There are also several *docents*. Instruction is given in the Philosophical Faculty in Botany, by Professor A. H. A. J. Münter; Chemistry by Professors Limprecht and Schwanert; Comparative Anatomy and Zoology, by Professor A. Gerstäker; Physiological Chemistry, by Extraordinary Professor F. Baumstark.

The University Hospital contains medical, surgical, ophthalmic, and obstetric clinics.

The number of students attending the Medical Faculty in 1877-78 was 219; and 235 in the summer session lately ended.

#### UNIVERSITY OF HALLE.

THE following are the regulations for the medical degree.

1. Application for admission to the examinations for medical promotion must be made to the Dean, and at the same time must be presented: (a) a curriculum vitæ; (b) certificate of maturity from a gymnasium; (c) certificate of having passed a *tentamen physicum* at least two years previously; (d) certificates of leaving, from the Universities, over at least eight medical scholastic half years. Whoever is unable to present these certificates complete, and in the manner specified, must obtain a dispensation from the Chief Manager, through the University's Curatorium.

2. On making application, 360 marks must be paid to the Dean for the examinations and the promotion, beside which, 12 marks must be paid before the promotion to the Secretary of the University.

3. The examinations are held on two consecutive days, by the regular professors of the Faculty, on

each of which days the result of the examination is made known to the candidate.

4. After passing his examination, the candidate must compose a scientific treatise on any subject he pleases in medical science, and deliver it to the Dean as an inaugural dissertation, together with the theses, to be publicly discussed, and the *curriculum vite* for examination and approval; the same when printed must fill at least two quires. The candidate must bear the cost of printing both the treatise and the diploma; but the diploma must be laid before the Dean for approval before being printed. Of the treatise, 172 copies must be delivered to the Secretary of the University at least three days before the promotion, and 40 copies of the diploma, when the Secretary will give a receipt in the name of the Dean, and also for the 12 *marks* mentioned under No. 2.

5. The candidates have to request all the examiners personally to be present at the examination, likewise the members of the Faculty, when handing over the printed treatise for promotion.

6. In the application for promotion, the candidate solicits from the Dean, in a few preliminary words, permission to defend his treatise and the theses; and this takes place, then, against two previously appointed opponents; after which, those present, (both from within and without the boundaries) are also called upon to join in the discussion. After the discussion is ended, the candidate begs the Dean to grant him the degree of Doctor; and this is done by administering the doctoral oath, and delivering the diploma.

7. Whoever fails to pass the examination, which includes all branches of medicine and surgery, will receive back from the fees paid 40 $\frac{1}{4}$  marks; the rest goes to the Faculty.

8. The time for taking the degree is left for the candidate to appoint. He must not, however, exceed one year from the time of passing the examination to the taking of the degree, or else he will have to submit to re-examination, and must pay over again all the fees.

The following professors, with several private teachers, constitute the Medical Faculty of this University. *Ordinary Professors*: J. Vogel, Medicine; L. Krahmer, *Materia Medica* and Forensic Medicine; Th. Weber, Medicine; R. Olshausen, Obstetrics and Gynæcology; Th. Ackermann, Pathology; H. Welcker, Anatomy; R. Volkmann, Surgery; J. Bernstein, Physiology; A. Gräfe, Ophthalmology; F. E. W. Steudener, Histology. *Extraordinary Professors*: H. Schwartz, Diseases of the Ears; O. Nasse, Physiology; H. Köhler, *Materia Medica* and Toxicology; M. Köppe, Psychological Medicine; E. Kohlschütter, Medicine; H. Fritsch. In the Philosophical Faculty, instruction in Sciences connected with Medicine is given by—*Professors* W. H. Heintz, Chemistry; C. Giebel, Zoology; G. Kraus, Botany.

The University Library contains 100,000 volumes. Connected with the University are a chemical laboratory, a botanical garden, a zoological museum, an anatomical theatre and zootomical museum, a lying-in institution, a medico-chirurgical hospital, and physiological, pathological, and pharmaceutical laboratories.

In 1877-78 the number of students in the Medical Faculty was 106. In the recent summer, the number was 117.

## UNIVERSITY OF HEIDELBERG.

THE following are the regulations to be observed for graduation in medicine in this University.

1. In applying for examination for the degree of Doctor, no evidence of a previous course of study is required.

2. The same demands are made of all candidates; the only difference is that the oral examination is shortened if evidence be produced that the candidate has undergone, in the German empire, the *Staats-examen* for license to practise.

3. The subjects of examination are (1) Anatomy; (2) Physiology; (3) Pathological Anatomy; (4) *Materia Medica* (Pharmacognosics, Pharmacodynamics, and Toxicology); (5) Medicine; (6) Surgery; (7) Midwifery; (8) Ophthalmic Surgery.

4. A candidate may select one of these as the principal subject of his examination. All the other subjects then become secondary.

5. The examination is oral and written. The oral examination can only be conducted in the German language.

6. The written part of the examination consists of a medical dissertation in German or Latin, which must be given in before the oral examination. The dean of the Faculty of Medicine delivers the dissertation (or a scientific publication by the candidate, which may be substituted for it) to a reporter for his opinion. The reporter is authorised to hold a conversation with the candidate on the subject treated of in the work. In voting on the dissertation, the question is put whether it shall be allowed to be printed. If it be printed, the names of the dean for the time being, and of the reporter, must appear on the title-page.

7. The oral examination comprises the principal subject chosen by the candidate, and a certain number of the secondary subjects. The number and selection of the secondary subjects vary, according as the state-examination has or has not been passed. If proof be given that a state-examination has been passed in the German Empire, the candidate is examined in the principal subject, and in three of the secondary subjects, selected by himself. If there be no proof of a state-examination, he is examined in five secondary subjects. Of these, three are fixed—Anatomy, Physiology, and Pathological Anatomy; the other two may be chosen by the candidate. But if one of the three fixed subjects be chosen by the candidate as the principal subject, its place as a secondary subject is taken by another, selected by the candidate.

8. The duration of the oral examination depends on the number of subjects. The candidate is examined on the principal subject for thirty minutes, on each secondary one for fifteen or twenty minutes, according to the judgment of the examiners.

9. On the result of the entire examination, three notes are granted. The first (*summâ cum laude*) can only be granted when the dissertation has received the *imprimatur* of the Faculty. Even when the *imprimatur* has been received, the result of the oral examination may be such to entitle the candidate to the second vote (*insigni cum laude*) or to the third (*cum laude*).

10. No oath is administered. When the diploma is delivered to the candidate by the dean, he has to give his hand in promise that he will bear his academic dignity with honour.

11. The cost of the examination, exclusive of that of the diploma, amounts in all to 444 marks (about



22*l.* 5*s.*), which must be paid before the commencement of the examination. Of this sum, if the oral examination be not passed, 179 marks (about 9*l.*) are returned.

12. The diploma contains a record of the principal subject, the vote on the whole examination, and the judgment on the dissertation.

The Medical Faculty consists of the following professors, with several teachers. *Ordinary Professors*: W. Lange, Midwifery; W. Delffs, Chemistry; N. Friedreich, Medicine; C. Gegenbaur, Human and Comparative Anatomy; W. Kühne, Physiology; O. Becker, Ophthalmology; Th. von Dusch, Medicine; J. Arnold, Pathology; V. Czerny, Surgery; *Honorary Professor*: A. Nuhn, Anatomy. *Extraordinary Professors*: H. Oppenheimer, Therapeutics; S. Moos, Diseases of the Ears; F. Knauff, Forensic Medicine; W. Erb, Diseases of the Nervous System and Electro-therapeutics; H. Lossen, Surgery; A. Weil, Medicine and Diseases of the Skin and Syphilis. In the Philosophical Faculty, instruction in subjects connected with medicine is given by—*Ordinary Professors*: R. Bunsen, Chemistry; H. Kopp, Chemistry; E. Pfitzer, Botany. *Extraordinary Professors*: A. Bornträger, Pharmacy; A. Horstmann, Chemistry.

In connection with the University are a hospital, with medical, surgical, ophthalmic clinics, an institution for diseases of the ear, a lying-in institution, anatomical, pathological, physiological, and zoological institutes, two chemical laboratories, and a botanical garden.

In the winter session 1877-78, the number of students in the Medical Faculty was 79.

#### UNIVERSITY OF JENA.

THE Faculty of Medicine of this University grants a degree in Medicine, Surgery, and Obstetrics, the conditions for which are as follows.

1. Certificate to be given as to the extent of medical studies and the period of time which has elapsed since their completion (at least six terms).

2. Satisfactory evidence as to character, from the neighbouring head office of police.

3. A written essay upon any subject of medical science, in German or Latin. The same composition must be given up, and is afterwards to be printed in the form of a dissertation.

4. Matriculation into this University. This is done when, upon fulfilment of the other conditions, the candidate himself makes his appearance.

5. Payment of examination and promotion fees must be made to the amount of 141 *thalers* (about 22*l.*) In case the examination is not passed, the promotion fees and 52 *thalers* are returned.

The examination will be held in the German language only. It comprises all branches of medicine, viz.: Anatomy, Physiology, Histology, General Pathology, Pathological Anatomy, Special Pathology, Medicine, Therapeutics, Surgery, Obstetrics, etc.

The Faculty holds examinations from the first day of November to the 15th day of March, and from the first day of May to the 15th day of August.

When the examination is passed, the student has to give in his dissertation, the subject of which he chooses for himself. The Faculty examines the work to see whether it is worth publication. A dispensation from the Latin or German disputation may be

granted when the examination is very satisfactorily passed.

After the essay is printed, and also when the public disputation is over, the making out of the medical diploma takes place.

The degree of Doctor will only be granted in this University by the Faculty upon fulfilment of the above-named conditions.

The Medical Faculty of this University is constituted as follows. *Ordinary Professors*: F. Ried, Surgery; B. S. Schultze, Obstetrics; W. Müller, Pathology; W. Preyer, Physiology; G. Schwalbe, Anatomy; H. Nothnagel, Medicine. *Extraordinary Professors*: P. Schillbach, Diseases of the Eye and Ear; F. Siebert, Psychology; M. Seidel, Materia Medica; C. Frommann, History of Medicine, and Histology; C. Bardeleben. There are also two private teachers. Subjects connected with Medicine are also taught in the Philosophical Faculty by—*Professors*: G. A. Genther, Chemistry; E. Häckel, Zoology. *Extraordinary Professors*: W. Artus, General and Pharmaceutical Chemistry; E. Reichardt, Chemistry; E. Hallier, Botany.

Connected with the University are the Grand-Ducal hospital, lying-in institution, and lunatic asylum; anatomical, zoological, physiological, pathological, and chemical laboratories and museums, etc.

#### UNIVERSITY OF KIEL.

THE following are the conditions for obtaining the medical degree:

1. The presentation on application of (a) a *curriculum vite*; (b) certificate of medical studies; (c) a scientific treatise;
2. A written examination;
3. A verbal examination before the Faculty;
4. Payment of 360 marks.

In this University the Medical Faculty consists of the following professors, with eight private teachers.

In this University the Medical Faculty consists of the following professors, with eight private teachers. *Ordinary Professors*: C. C. T. Litzmann, Obstetrics and Gynæcology; F. Esmarch, Surgery; H. Quincke, Medicine; V. Hensen, Physiology; A. Heller, Pathology; C. Volckers, Diseases of the Eye; W. Flemming, Anatomy. *Extraordinary Professors*: J. Bockendahl, Forensic Medicine; F. Petersen, Surgery; A. Pansch, Anatomy; F. A. Falck. Instruction is also given in the Philosophical Faculty by *Ordinary Professors*: C. Himly, Chemistry; A. W. Eichler, Botany; A. Ladenburg, Chemistry.

There are a medico-surgical hospital, a lying-in institution, and laboratories and museums in connection with the several subjects taught.

The number of students attending the medical classes in the winter session 1876-77 was 70; and 92 in the summer session of 1878.

#### UNIVERSITY OF KÖNIGSBERG.

THE Medical Faculty of this University consists of the following professors, with five private teachers.

*Ordinary Professors*: G. Hirsch; W. von Wittich, Physiology; H. Hildebrand, Obstetrics; — Anatomy; E. Neumann, Pathology; C. Schönborn, Surgery; B. Naunyn, Medicine; J. Jacobson, Ophthalmology; M. Jaffe, Materia Medica. *Extraordinary Professors*: H. Bohn, Diseases of the Skin; A. W. Grünhagen, Histology and Histological Chemistry;

S. Samuel, Therapeutics; A. von Hippel, Ophthalmology; S. Pincus, Forensic Medicine; E. Berthold, Diseases of the Eye and Ear; F. R. A. Schneider, Surgery and Military Surgery; H. Benecke, Anatomy; — Burrow, Surgery; — Caspary. Lectures are also given in the Philosophical Faculty by *Professors* R. Caspary, Botany; G. Zaddach, Zoology; H. Spirgatis, Chemistry; W. Lossen, Chemistry.

Connected with the University are anatomical, pathological, and physiological institutions, medical, surgical, obstetrical, and ophthalmic clinics; chemical and pharmaceutical laboratories, etc.

There were 135 students in the Faculty of Medicine in the recent summer session.

#### UNIVERSITY OF LEIPZIG.

THE Medical Faculty of this University consists of the following professors and a number of private teachers. *Ordinary Professors*: F. Hofmann, Hygiene and Pharmacology; E. Wagner, Clinical Medicine; K. S. F. Credé, Midwifery; J. Cohnheim, Pathological Anatomy; K. Ludwig, Physiology; K. Thiersch, Surgery; E. A. Coccus, Ophthalmology; W. His, Anatomy; W. Braune, Anatomy. *Extraordinary Professors*: H. Sonnenkalb, Forensic Medicine and Hygiene; J. V. Carus, Zoology and Comparative Anatomy; A. Winter, Materia Medica; F. Hermann, Obstetrics; K. Hennig, Obstetrics; K. H. Reclam, Forensic Medicine and Hygiene; B. Schmidt, Surgery; E. Wenzel, Anatomy and Histology; J. L. O. Heubner, Medicine; R. Hagen, Otolaryngology, etc.; F. Ahlfeld, Obstetrics; P. Flechsig, Anatomy and Histology. Instruction is also given in the Philosophical Faculty by—*Ordinary Professors*: H. Kolbe, Chemistry; A. Schenck, Botany; R. Leuckart, Zoology; G. Wiedemann, Chemistry. *Extraordinary Professor*: H. Hirzel, Pharmacy.

In connection with the University are chemical, physico-chemical, and pathologico-chemical laboratories: a zoological institute, under the direction of Professor Leuckart; an anatomical institute, under Professor His; a physiological institute, under Professor Ludwig; and various clinics, etc.

The number of students in the Medical Faculty during the winter 1877-78 was 365.

#### UNIVERSITY OF MARBURG.

ANY one wishing to proceed to the medical degree at this University must send in to the Dean of the Faculty of Medicine the following:

1. A *curriculum vite*;
2. A certificate of scientific studies;
3. A certificate of at least four years' study at a recognised University or Medical College;
4. A dissertation in the German language.

If these be considered satisfactory by the Faculty, the candidate is then admitted to a *viva voce* examination in the German language. If the examination be satisfactorily passed, the dissertation must be printed, at the candidate's expense, and publicly defended. Three or four printed theses must also be sent in. The cost for the diploma is 330 marks (16*l.* 10*s.*)

The following are the professors in the Medical Faculty of this University. *Ordinary Professors*: K. F. von Heusinger, Pathology and Therapeutics; H. Nasse, Physiology; W. Roser, Surgery; C. P. Falck, Medicine; R. Dohrn, Midwifery; N. Lieber-

kühn, Anatomy; F. W. Beneke, Pathological Anatomy and General Pathology; E. Mannkopff, Pathology and Therapeutics; H. Schmidt-Rimpler, Ophthalmology; H. Kramer, Psychology. *Extraordinary Professors*: G. Wagener, Anatomy; H. Horstmann, Forensic Medicine; H. Lahs, Midwifery; E. Külz, Physiology and Physiological Chemistry. Lectures are also given in the Philosophical Faculty by—*Ordinary Professors*: C. Zwenger, Pharmaceutical Chemical Chemistry; A. Wigand, Botany; R. Greeff, Zoology; T. Zincke, Chemistry.

A hospital and various laboratories, etc., for practical instruction are connected with the University.

The number of students attending the Medical Faculty in 1877-78 was 100; and 110 in the summer of 1878.

#### UNIVERSITY OF MUNICH.

IN granting medical degrees at this University, a distinction will in future be made between those candidates who have already passed a satisfactory public examination as Physicians before a German Commission of Examiners, and those who have not, be they natives or foreigners.

From those candidates who have already passed the satisfactory German examination, nothing further is required in order to admit them to compete for the doctorate than the certificate of having passed such examination. The Medical Faculty dispenses such candidates from a repetition of an examination of that kind, as the having passed satisfactorily that examination shows that they have fulfilled all the necessary stipulations, and that they possess the requisite theoretical and practical knowledge.

The Faculty requires, however, the presentation of a dissertation, written in either the Latin or German language. This is delivered by the Dean to one of the members of the Faculty for examination and judgment, and with his judgment it is circulated amongst the Faculty. If the Faculty approve of it, then it is printed at the expense of the candidate, for the members of the Faculty.

Candidates, however, who have not passed the German "Approbation-examination" for Physicians must, before being admitted to the doctorate examination, present to the Medical Faculty the following:

1. A gymnasial certificate, or at least such certificate as shows that the candidate has enjoyed a regular education;
2. Certificates of at least four years' attendance at a university or medical institution, and of attendance at the lectures on the principal branches of natural science and medicine;
3. Clinical certificates of the treatment of an internal surgical and eye complaint, and also assistance at a birth;
4. A certificate of the performance of an operation on the dead body, and the application of a bandage.
5. The candidate must then pass a two hours' verbal examination (in the German language) in the following branches, viz.: Anatomy, Physiology, General Pathology, and Pathological Anatomy, Materia Medica, Therapeutics, Surgery, Midwifery, Hygiene, Diseases of the Eye.
6. The candidate has also to give in a dissertation, which must be examined by a member of the Faculty, to see whether it is worthy of being printed. The printing may be dispensed with at the request of the candidate.



7. The fees for examination and promotion amount, for both kinds of candidates, to 100 *thalers*, 300 *marks*, or 175 *florins* (15*l.*)

The professorial staff of the Medical Faculty of this University is constituted as follows. *Ordinary Professors*: J. N. von Ringseis, General Pathology and Therapeutics; F. X. von Gietl, Medicine; F. C. von Rothmund, Surgery and Clinical Surgery; C. T. von Siebold, Zoology and Comparative Anatomy; N. Rüdinger, Anatomy and Physiology; F. Seitz, *Materia Medica* and Medicine; L. A. Buchner, Pharmacy; M. von Pettenkofer, Hygiene; W. F. C. von Hecker, Midwifery; L. von Buhl, General Pathology and Pathological Anatomy; J. N. von Nussbaum, Surgery, Ophthalmology, and Clinical Surgery; A. von Rothmund, jun., Ophthalmology; C. Voit, Physiology; H. von Ziemssen, Special Pathology and Therapeutics; B. von Gudden, Psychology. *Extraordinary Professors*: T. von Hessler, Histology; A. Rember, Histology; O. Bollinger, Hygiene; H. Ranke, *Materia Medica* and Medicine; J. Amann, Midwifery; A. Martin, State Medicine; J. Oertel, Laryngoscopy; H. von Böck, Toxicology; J. Bauer, Medicine. Instruction in Chemistry is also given in the Philosophical Faculty.

The University is situated in the Ludwigstrasse, is a new building, and contains a library consisting of 500,000 volumes, the largest after Paris and London.

Among the auxiliary institutions, the chemical laboratory for hygiene is under the direction of Professor von Pettenkofer.

The number of students attending the Faculty of Medicine in 1877-78 was 341.

#### UNIVERSITY OF ROSTOCK.

WHOEVER wishes to graduate as "*Medicinæ, Chirurgiæ, et Artis Obstetriciæ Doctor*" at this University, must apply to the Dean of the Medical Faculty, and deliver to him at the same time the following documents:

1. A certificate of having gone through the requisite course of studies in an university;
2. A certificate of examination, testifying to the ability of the candidate in the practice of medicine;
3. A treatise on any subject appertaining to medical science, composed by the candidate himself. A fee of 350 *marks* must be paid to the Faculty at the same time, of which two-thirds will be returned provided the treatise is not deemed satisfactory.

The Medical Faculty consider the certificate of maturity from a German gymnasium a necessary preliminary condition for professional medical studies.

The proof of having passed a satisfactory examination in Germany is, under all circumstances, satisfactory. If, however, this document should not appear satisfactory, or cannot be presented at all, the Faculty require that the candidate be subjected to an examination by the Faculty which shall pretty nearly correspond to the German States' Examination. For this examination, an additional 200 *marks* must be paid to the Faculty. Only for special cases does the Faculty reserve to itself a special form of examination.

The inaugural dissertation must be the candidate's own, and he must append to his treatise a written declaration to that effect. It is not, however, required that the work be composed entirely without

assistance; but in this case, the literary resources, and also the name of him or them from whom he has received help, must be clearly and distinctly stated. Those essays are considered the best which contribute most to medical or scientific knowledge. After the dissertation has been stamped by the Dean in the name of the Faculty, the same must be printed, at the expense of the author, and at least 125 copies delivered to the Faculty.

When the candidate has satisfactorily fulfilled the above conditions, he must introduce his essay, and read it publicly in the Aula, and defend it against any objections that may be made.

Promotions *in absentia* cannot be made, except with the sole exception of a *promotio honoris causâ* for distinguished service to medical science.

The Medical Faculty of this University consists of the following *Ordinary Professors*: H. Stannius; T. Thierfelder, Special Pathology and Therapeutics; H. R. Aubert, Physiology; W. von Zehender, Ophthalmology; F. Schatz, Midwifery; F. S. Merkel, Anatomy; C. Gaetgens, Chemistry; F. Trendelenburg, Surgery; A. Thierfelder, Pathological Anatomy. In the Philosophical Faculty, lectures on subjects connected with medicine are delivered by—*Ordinary Professors*: O. Jacobsen, Chemistry; and H. Grenacher, Comparative Anatomy and Zoology.

In 1877-78, 36 students attended the Faculty of Medicine.

#### UNIVERSITY OF STRASBURG.

THE following is an extract from the regulations of the University of Strasburg relative to Degrees in Medicine.

Any person desirous of obtaining the degree of Doctor of Medicine can only be admitted to graduation on fulfilling the following conditions. *a.* If he belong to the German empire, he must have completed an academical four years' course of study of Medicine, or of the Natural Sciences. By an unanimous decision of the Faculty, one or two Sessions may be omitted. Foreigners desirous of graduating are not required to have passed through the four years' course, if they produce proof of having received instruction equivalent to the course of study in the Medical Faculties of Germany. *b.* He must present a scientific essay (dissertation) composed by himself. *c.* He must undergo the Faculty examination. *d.* He must pay the prescribed fee of 300 *marks* (about 15*l.*)

In his application for graduation, which must be addressed to the Dean, the candidate must produce the evidence referred to in *a.*, and forward a scientific memoir on some department of medicine, with a written assurance that it is absolutely his own composition. If the dissertation receive the approval of the Faculty, the candidate is admitted to examination.

The examination is conducted by the ordinary professors, and consists, as a rule, of an oral theoretical examination in all important departments of medicine. If the candidate fail to give satisfaction in the oral examinations, he must, in order to obtain the degree of doctor, again undergo the examination after a time to be determined by the Faculty, but he is not required to present a second dissertation.

In the case of candidates who have already passed the State examination, a colloquy before three members of the Faculty may, by the unanimous decision

of the Faculty, be substituted for the oral examination.

Degrees in Medicine are not conferred on absent candidates.

If the dissertation be rejected, the candidate receives the whole fee back. If the dissertation be approved, but the candidate fail in the examination, the fee is not returned to him, but, when he is again admitted to examination, only half that fee is required.

After the Faculty examination has taken place and the dissertation has been printed and published, the candidate is formally admitted to the degree of Doctor by the issuing of a printed diploma, the names of the successful candidates being announced.

The candidate has to bear the expense of printing the dissertation and of the diploma.

There is no public ceremony, and no oath is administered.

Matriculation takes place on the first four Wednesdays of the season, from twelve to one o'clock. After the end of these four weeks, the rector can allow matriculation only on special grounds. Any one desirous of matriculating as a student, and attending the lectures and other instructions given in the University, must, on his arrival in Strasburg, communicate with the Secretary of the University, in order to be inscribed. Other persons desirous of attending the lectures must obtain permission from the respective teachers, and must then at once communicate with the Secretary of the University.

The following are the professors and teachers of the University. *Ordinary Professors:* G. Waldeyer, Human Anatomy; J. G. Jössel, Anatomy; F. L. Goltz, Physiology; F. Hoppe-Seyler, Physiological and Pathological Chemistry; O. Schmiedeberg, Pharmacology and Therapeutics; F. von Recklinghausen, Pathological Anatomy and Physiology, and Histology; A. Kussmaul, Medicine and Clinical Medicine; A. Lücke, Surgery and Clinical Surgery; E. Strohl, Forensic Medicine and Public Health; F. Wiegner, History of Medicine, Diseases of the Skin, and Syphilis; A. Aubenas, Obstetrics and Gynaecology; F. Jolly, Psychiatry. *Extraordinary Professors:* L. Laqueur, Diseases of the Eye; O. Kohts, Medicine and Diseases of Children. There are also six *docents*. Instruction in subjects connected with Medical Science is also given in the Faculty of Mathematics and Natural Science by the following *Professors:* O. Schmidt, Comparative Anatomy; A. de Bary, Botany; F. A. Flückiger, Pharmacy and Pharmaceutical Chemistry; R. Fittig, Experimental Chemistry. *Extraordinary Professors:* F. Rose, Practical Chemistry; A. Goette, Zoology.

Connected with the University are institutions for the practical study of anatomy, experimental physiology, physiological chemistry, pathology, and pharmacology, and clinics for medicine, surgery, midwifery, mental diseases, diseases of the eye, and syphilis, and diseases of the skin.

The number of matriculated medical students in the winter session 1877-78 was 152; and in the summer of 1878, 150.

#### UNIVERSITY OF TÜBINGEN.

THE Faculty of Medicine here grants a degree in Medicine under the following conditions.

1. The candidate must send in with his application—*a.* A *curriculum vite*; *b.* A certificate of

having gone through a thorough course of instruction at the Gymnasium or some equivalent institution; *c.* Proof of a sufficient study of medicine at an university, and certificates of having attended the lectures having reference to the subjects of examination.

2. The examination consists of a written and a subsequent verbal one. A legalised proof of having passed a satisfactory examination in medicine and surgery in a foreign country dispenses with the written examination, but not with the verbal one. In no case can a degree be granted *in absentia*.

3. In the written examination will be put one question in each of the following subjects: 1. Anatomy; 2. Physiology; 3. *Materia Medica*; 4. General Pathology and Therapeutics; 5. Two questions in Special Pathology and Therapeutics. In addition to which, if a Doctor's degree in Surgery be required, one question will be put on each of the following subjects: 1. General Surgery; 2. Special Surgery; 3. Surgical Operations; 4. Midwifery.

4. The fees amount to 300 *marks*, including the printing of the diploma, which fee must be paid on application. If the candidate be rejected at the written examination, and be not admitted to the verbal one, the whole of the fees will be returned. If he be rejected after the verbal one, only half will be returned.

5. The candidate must compose a dissertation under the presidency of a member of the Faculty, and get it printed; 250 copies are to be presented to the University. If, however, the essay be published either in a periodical or as a special pamphlet, 100 copies will suffice, but they must be provided with a special title-page. Only such candidates as have given numerous and satisfactory literary proofs of their capacity can be allowed to dispense with the composition.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors:* V. von Bruns, Surgery; K. von Vierordt, Physiology; O. Schüppel, Pathology; J. Säxingor, Midwifery; C. Liebermeister, Medicine; T. Jürgensen, Medicine and *Materia Medica*; A. Nagel, Ophthalmology; P. J. W. Henke, Anatomy. *Extraordinary Professors:* V. Oesterlen, Forensic Medicine and Hygiene; O. Leichtenstern, Medicine. Lectures are also given on subjects connected with Medicine in the Faculty of Natural Science by—*Ordinary Professors:* T. Eimer, Zoology; C. G. Hüfner, Chemistry; L. Meyer, Chemistry; and *Extraordinary Professors:*—Hegelmier, Botany; and W. Städel, Chemistry.

A hospital and institution for practical instruction are connected with this University.

The number of students in the Faculty of Medicine in the winter session 1877-78 was 222.

#### UNIVERSITY OF WÜRZBURG.

BEFORE being admitted to the examination for the Doctorate of Medicine, Surgery, and Midwifery, the candidate must pass the medical approbation examination, which consists in showing—by testimonials or certificates—that he has a good moral character, and that he has passed through four years' study at an university, six sessions of which must have been devoted to medical studies.

Upon fulfilment of these conditions, the candidate will be admitted to a written and *vivâ voce* examina-



tion, before which, however, he must pay to the Faculty 300 marks (15*l.*).

The written examination consists in the composition of a scientific work out of the sphere of theoretical or practical medicine, which dissertation must be handed to the Dean, who will give it to one of the examining professors to report on. Upon the satisfactory or unsatisfactory decision of the reporter depends the admission to the *vivâ voce* examination. It is customary for the dissertation to be printed.

If the decision of the reporter with regard to the theme be unfavourable, then admission to the *vivâ voce* examination is denied, and another theme must be composed and handed in at a future time. Should the second theme, however, be deemed unsatisfactory, the candidate will not be allowed to reappear. He then receives back all his fees except 30 marks.

If the dissertation be approved by the Faculty, then the candidate is admitted to a *vivâ voce* examination, in the German language, which consists of the following subjects: Anatomy and Pathological Anatomy, Physiology, Pathology and Medicine, Special Therapeutics, Surgery, Obstetrics and Ophthalmology. A knowledge also of Psychology and State Medicine is required.

After taking the examination oath, the result and standing of the examination is imparted to the candidate by the Dean—whether very good, good, or moderate.

When the candidate is unsuccessful at the *vivâ voce* examination, he receives back half the fees, and is allowed to present himself for examination again in six months' time by paying half the fees again. Only one more attempt is, however, allowed after the first rejection at the *vivâ voce* examination.

After successful examination, the candidate will receive his diploma of doctor.

In this University, the Medical Faculty consists of the following professors, with several *doctents*. *Ordinary Professors*: F. von Reinecker; Syphilis and Diseases of the Skin, also Psychiatry and Psychiatric Clinic; A. von Kölliker, Human, Comparative, and Topographic Anatomy; F. W. Scanzoni von Lichtenfels, Midwifery; — Riedinger, Surgery and Clinical Surgery; A. Fick, Physiology; C. Gerhardt, Medicine and Clinical Medicine, and Diseases of Children; F. Rindfleisch, Pathological Anatomy, General Pathology and History of Medicine; R. von Welz, Ophthalmic Surgery; A. Geigel, Clinical Medicine and Hygiene; M. Rossbach, *Materia Medica*. *Extraordinary Professors*: A. F. von Tröltzsch, Aural Surgery; W. Reubold, Forensic Medicine. Lectures are also given in the Philosophical Faculty by—*Ordinary Professors*: J. Sachs, Botany; J. Wislicenus, Chemistry; K. Semper, Zoology; F. Kohlrausch, Experimental Physics.

The number of students attending the Medical Faculty of this University in the session 1877/78 was 434.

## MEDICAL DEGREES IN THE AUSTRO-HUNGARIAN EMPIRE.

THE universities of the Austro-Hungarian Empire which possess Medical Faculties and grant degrees in medicine are: Agram (Croatia), Gratz (Styria),

Innsbrück (Tyrol), Cracow, Lemberg (Galicia), Pesth (Hungary), Prague (Bohemia), Salzburg, and Vienna.

Candidates for the degree of Doctor of Medicine in the Universities of the Austrian Empire are required to undergo three examinations. Before being admitted, the candidate must produce (a) his certificate of birth or baptism, and evidence (b) of having received a sufficient preliminary education in one of the institutions of the countries comprised in the empire, or, if he do not belong to any of these, evidence of having matriculated as an ordinary student in a Faculty of Medicine; (c) of having attended lectures in a medical school during at least four sessions, and of having dissected during two sessions; (d) of having passed, at one of the Universities of the empire, three examinations, in botany, zoology, and mineralogy. Before being admitted to the second examination, he must produce evidence of having been engaged five years in professional study, and of having studied clinical medicine and clinical surgery, each during four sessions, and clinical ophthalmology and clinical midwifery, each during at least one session; and of having passed the first examination.

The first examination embraces physics, chemistry, anatomy, and physiology. There is a practical examination on anatomy and physiology, and a theoretical examination on all four subjects.

The second examination includes general pathology and therapeutics, pathological anatomy and histology, pharmacology (pharmacodynamics, toxicology, and prescribing), and the pathology and therapeutics of internal diseases. The candidate is examined practically in pathological anatomy (with preparations and on the dead body), and in medicine (at the bedside); and theoretically in all the subjects.

The third examination embraces surgery, ophthalmic surgery, midwifery and diseases of women, and forensic medicine. The examinations in surgery, ophthalmic surgery, and midwifery are practical; and there are theoretical examinations in all the subjects.

All these examinations must take place at the same university. In very exceptional circumstances only is a candidate allowed to pass the second or third examination at another university than that at which he has passed the first.

The examinations are public, and are conducted by a President, the regular examiners, the Government commissioner, and at the last there is a co-examiner appointed by the Government. Each member of the commission examines for a quarter of an hour.

The fee for the first examination is 55 florins, for the second 60 florins, and for the third 65 florins (Austrian). The promotion fees for the Doctorate amount to 60 Austrian florins. The total for the M.D. degree is about 23*l.* of English money.

The examinations are conducted in German, except at Cracow and Lemberg, where they are in Polish.

## UNIVERSITY OF VIENNA.

In this University, the Medical Faculty is constituted as follows. *Ordinary Professors*: C. A. Voigt, Anatomy; E. von Brücke, Physiology; F. von Arlt, Ophthalmic Surgery; J. von Dumreicher, Practical and Clinical Surgery; K. Langer, Descriptive and Topographic Anatomy; K. Braun von Fernwald,

Midwifery, Clinical Midwifery and Gynæcology, etc.; H. von Bamberger, Special Medical Pathology, Therapeutics, and Clinical Medicine; R. L. Heschl, Pathological Anatomy; A. Duchek, Special Medical Pathology and Therapeutics, and Clinical Medicine; J. Späth, Theory and Practice of Midwifery; K. Stellwag von Carion, Ophthalmic Surgery; Th. Billroth, Practical and Clinical Surgery; G. Braun, Midwifery (for Midwives); F. R. Seligmann, History of Medicine; E. Hofmann, Forensic Medicine; K. Sigmund von Llanor, Syphilology; K. Wedl, Histology; S. Stricker, Experimental and General Pathology; Th. Meynert, Psychiatry and Nervous Diseases; A. E. Vogl, Pharmacology and Pharmacognosy; E. Ludwig, Chemistry. *Extraordinary Professors*: E. Jäger von Jaxthal, Ophthalmic Surgery; J. Seegen, Balneology; C. Cessner, Use of Instruments and Bandages; H. Zeissl, Syphilology; M. F. Röhl, Contagious Diseases; L. Schlager, Psychiatry; F. Müller, Zootomy and Comparative Physiology; J. Clob, Pathological Anatomy; L. Dittel, Surgery; H. Widerhofer, Diseases of Children; M. Leidesdorf, Psychiatry; M. Schwanda, Medical Physics; M. Benedikt, Electro-Therapeutics; S. Stern, Elementary Clinical Instruction; A. Politzer, Aural Surgery; J. Greiber, Aural Surgery; J. Weinlechner, Surgery; G. Löbel, Clinical Medicine; S. L. Schenk, Embryology; A. Drasche, Epidemiology; K. von Schrott, Toxicology and Prescribing; A. von Mosetig-Moorhof, Operative Surgery; J. Nowak, Hygiene; K. Stoerk, Laryngoscopy and Diseases of the Larynx; L. von Schrötter, Laryngoscopy and Diseases of the Larynx; M. Kaposi, Diseases of the Skin and Syphilis; H. Auspitz, Diseases of the Skin and Syphilis; L. Neumann, Diseases of the Skin and Syphilis; F. Salzer, Operative Surgery; S. Exner, Physiology; M. Rosenthal, Diseases of the Nervous System; K. Mayrhofer, Midwifery and Gynæcology; G. Wertheim, Diseases of the Skin and Syphilis; L. Politzer, Diseases of Children; S. von Basch, Experimental Pathology. There are also between sixty and seventy private teachers. In the Philosophical Faculty, lectures on subjects connected with medicine are given by—*Ordinary Professors*: K. von Brühl, Zootomy; L. K. Schmarda, Zoology; K. Claus, Zoology and Comparative Anatomy; J. Miesner, Vegetable Anatomy and Physiology; A. Lieben, Chemistry; L. Barth von Barthenau, Chemistry; *Extraordinary Professors*: J. Böhm, Botany; H. W. Reichardt, Botany; E. Lippmann, Chemistry.

The General Hospital (*Allegemeine Krankenhaus*) is capable of accommodating about 3000 patients. There are two medical clinics, under Professors Duchek and Von Bamberger; two surgical clinics, under Professors Von Dumreicher and Billroth; a clinic for Diseases of the Eye, under Professors Von Arlt and Stellwag von Carion; and three clinics for Obstetrics—two for students being under the charge of Professors Carl Braun-Fernwald and Späth, and one for Midwives under Professor Gustav Braun. The clinics for Diseases of Women are under the charge of Professors Braun-Fernwald and Späth. There are also special clinics for Diseases of the Skin, under Professor Hebra; for Syphilis, under Professor Sigmund; for Laryngoscopy, under Professor Schrötter; for Diseases of Children, under Professor Widerhofer; for Psychology, under Professor Meynert; and for Otology, under Professor Gruber. A considerable portion of the school is also situated within the hospital; thus there are the

Pathological Museum and *post mortem* room, under the direction of Professor Heschl; the room for medico-legal necropsies, under Professor Hofmann; the Institute for Experimental Pathology, under the direction of Professor Stricker; and the Institute of Chemical Pathology, under Professor Ludwig. The Anatomical Museum and Dissecting Room, the Anatomical Institute and Dissecting Room, under the direction of Professor Langer; the Physiological Institute, where the Practical Physiology is carried on under Professor Brücke; the *Materia Medica* Museum, and the Medical Library, are outside the hospital, in the Alsergrund.

The great clinics on medicine, surgery, etc., are conducted during the two sessions, from the middle of October to the middle of March, and from the middle of April to the end of July. They are under the immediate direction of the Professors of the Medical Faculty, and constitute, of course, an essential part of the curriculum of study for the ordinary Austrian student. The clinic for Diseases of the Skin, conducted by Professor Hebra, is much frequented by Americans, English and other foreigners.

The special courses of instruction are most numerous during the regular academical sessions, but there are always some going on, even in August and September. They last usually, from four to eight weeks, and the lecturer generally commences a new course a few days after the old one is finished. The numbers in attendance vary from half a dozen to thirty or forty and sometimes even more. The courses for Diseases of the Throat and of the Ear are most frequented, and there are usually two or more courses on each of these subjects going on simultaneously. Among the other subjects taught in the same way are the use of the ophthalmoscope, operations on the eye, surgical operations on the dead body, auscultation and percussion, diseases of children, demonstrations of syphilis, demonstrations of skin-diseases, electro-therapeutics, etc. The courses are given for the most part by the private lecturers and the professors' assistants, and the material for them is derived from the wards of the clinical professors. For a six or eight weeks' course, the fee is usually from fifteen to twenty florins. The instruction in them is demonstrative or practical, involving the use of instruments and apparatus by the students themselves. Clinical instruction on children's diseases is given at the St. Anne's Hospital, in the immediate neighbourhood of the Krankenhaus, by Professor Widerhofer and Dr. Monti, and is greatly valued by foreign students. This and many other of the courses are often attended by students for a second or even third time. It will be readily understood that a student desirous of occupying his time to the best advantage at Vienna must be prepared to expend a considerable sum in fees.

Vienna affords great opportunities for the study of pathological anatomy. There are separate *post mortem* rooms for the cases from the clinical wards, medico-legal cases, and the ordinary cases. At the two former, the clinical professor or assistant is usually in attendance. The examinations go on all the morning, there being sometimes as many as a dozen in one day. The ordinary *post mortem* examinations are gone through with great rapidity by pathological assistants without any view to teaching, but the most interesting specimens of the day are reserved for demonstration at a class held in the afternoon by the first assistant. This class is composed of foreigners, and is well worth attending.



## UNIVERSITY OF CRACOW.

THE Medical Faculty of this University consists of the following professors, with several *docents*. *Ordinary Professors*: A. Bryk, Surgery; G. Piotrowsky, Physiology and Microscopy; L. Teichmann, Descriptive Anatomy; M. Madurowicz, Midwifery; S. Janikowski, Forensic Medicine; L. Rydel, Ophthalmology; A. Stopczanski, Medical Chemistry; E. Korczynski, Medicine and Clinical Medicine. *Extraordinary Professors*: A. Rosner, Diseases of the Skin and Syphilis; J. Oettinger, History of Medicine; M. L. Jakubowski, Diseases of Children. Instruction in subjects connected with medicine is given in the Philosophical Faculty by—*Ordinary Professors*: L. Czerwiakowski, Botany; E. Czyrniński, General and Pharmaceutical Chemistry; M. S. Nowicki, Zoology. *Extraordinary Professors*: E. Janczewski, Vegetable Anatomy and Physiology; K. Olszewski, Chemistry.

## UNIVERSITY OF GRATZ.

IN this University, the Medical Faculty consists of the following professors, with about 12 *docents*. *Ordinary Professors*: A. Schauenstein, State Medicine; J. von Planer, Descriptive and Topographical Anatomy; K. von Rzehaczek, Surgical Pathology and Therapeutics and Clinical Surgery; K. von Hetly, Midwifery and Gynaecology; A. Rollett, Physiology and Histology; K. Blodig, Ophthalmic Surgery; O. Rembold, Medicine; H. Kundrat, Pathological Anatomy. *Extraordinary Professors*: J. von Koch, Epidemic Diseases and Sanitary Police; V. von Ebner, Histology and Embryology; K. B. Hoffmann, Chemistry; R. von Krafft-Ebing, Psychiatry; E. Lipp, Diseases of the Skin; C. von Scroff, General Pathology and Therapeutics. Lectures are also given in the Philosophical Faculty by—*Ordinary Professors*: H. Leitgeb, Botany; C. von Ettingshausen, Botany; L. von Pebal, Chemistry; F. E. Schulze, Zoology and Comparative Anatomy.

Connected with the University are anatomical, physiological, pathological, and zoological institutes; medical, surgical, ophthalmic, obstetric, and gynaecological clinics; a laboratory for physiological and pathological chemistry; a chemical laboratory, etc.

## UNIVERSITY OF INNSBRUCK.

THE following professors belong to the Medical Faculty. *Ordinary Professors*: K. Dantscher, Descriptive Anatomy; L. Kleinwächter, Obstetrics and Gynaecology; A. Tschurtschenthaler, General Pathology, Pharmacognosy, and Pharmacology; M. von Vintschgau, Physiology; F. Schott, Pathological Anatomy; L. Mauthner, Ophthalmic Surgery; E. Albert, Surgery and Clinical Surgery; K. Senhofer, Medical Chemistry; M. Dieth, Experimental Pathology. *Extraordinary Professors*: F. Wildner, Veterinary Medicine; J. Oellacher, Histology and Embryology; E. Lang, Syphilology and Dermatology; P. von Rokitsky, Diseases of the Chest. In the Philosophical Faculty instruction in subjects connected with medicine is given by—*Ordinary Professor*: C. Heller, Zoology and Comparative Anatomy; and A. Kerner, Botany.

The ordinary laboratories, clinics, and other means of practical instruction, are possessed by this University.

## UNIVERSITY OF PRAGUE.

THE Medical Faculty of this University consists of the following professors, with several *docents*. *Ordinary Professors*: A. Jaksch von Wartenhorst, Medicine and Clinical Medicine; J. Blazini, Surgery and Clinical Surgery; J. Halla, Medicine and Clinical Medicine; J. Streng, Midwifery; S. Strupí, Veterinary Medicine; J. Hasner von Artha, Ophthalmology and Ophthalmic Clinic; J. von Waller, General Pathology and Therapeutics; J. Maschka, State Medicine; E. Hering, Physiology; F. Weber von Ebenhof, Midwifery; C. H. Huppert, Medical Chemistry; E. Klebs, Pathological Anatomy; A. Breisky, Midwifery; C. Toldt, Anatomy. *Extraordinary Professors*: J. Lerch, Forensic, Physiological, and Pathological Chemistry; G. von Rittenshain, Diseases of Children; Th. Eisel, Clinical Medicine (in Bohemian); J. Kaulich, Diseases of Children; S. Mayer, Physiology; P. Knoll, Experimental Pathology; P. J. Pick, Skin-Diseases; A. Pribram, Clinical Medicine; E. Zaufal, Aural Surgery; J. Fischel, Psychiatry; H. Eppinger, Pathological Anatomy; W. Weiss, Operative Surgery. In the Philosophical Faculty, lectures are delivered by—*Ordinary Professors*: F. Stein, Zoology; G. A. Weiss, Botany; E. Linnemann, Chemistry; M. Willkomm, Botany; A. Fric, Zoology (in Bohemian); L. Celakovsky, Botany (in Bohemian).

Connected with the University are an anatomical theatre; pathological, physiological, medico-chemical, and zoo-chemical institutes; medical, surgical, ophthalmic and dermatological clinics (one of the medical clinics being Bohemian); obstetric clinics for practitioners and for midwives, etc.

## MEDICAL EDUCATION IN SWITZERLAND.

IN Switzerland, degrees in Medicine are granted in the Universities of Basel, Bern, Geneva, and Zürich.

## UNIVERSITY OF BASEL.

THE degree of Doctor of Medicine, Surgery, and Midwifery, granted by this University, can only be obtained with the fulfilment of the following conditions.

1. Application for admission to the examination must be made to the Dean of the Faculty, in writing, enclosing: *a*. A "curriculum vitæ"; *b*. The academical matriculation of this place; *c*. Certificates of attendance at the academical lectures; *d*. A certificate of conduct from the High School in which the candidate has made his principal studies; *e*. A scientific treatise on any subject he chooses within the sphere of medical, or natural science.

2. The examination is partly written (*tentamen*) and partly verbal (*rigorosum*).

3. The written examination consists in the answering of five questions having reference to Anatomy, Physiology, Pathological Anatomy and Pathological Physiology, Special Pathology and Therapeutics, and Surgery.

4. In case of rejection, the Faculty can appoint a time for a repetition of the examination, before which time the candidate cannot be re-examined.

5. The whole of the professors of the Faculty

are invited to the verbal examination. The following are the subjects: Anatomy, Physiology, Pathological Anatomy and Physiology, Special Pathology and Therapeutics, Materia Medica, Surgery, Midwifery.

6. The examination by one examiner must not last longer than half an hour.

7. The degrees in which doctorships are granted are "Summâ cum laude", "Insigni cum laude", "Magnâ cum laude", "Cum laude", and "Rité".

8. In adjudicating on both the written and verbal examination, not only will the special knowledge in the respective branches be taken into consideration, but also the possession of a general scientific knowledge, and especially a comprehensive knowledge of Natural Science.

9. One hundred and twenty copies of the treatise must be delivered to the Faculty.

10. Promotions are not granted to applicants who have not passed the examinations here; but the Faculty can confer the degree of doctor on notable and eminent physicians "honoris causâ".

11. The fees for the examination amount to 250 francs, viz., 100 for the *tentatum*, 200 for the *rigorosum*, and 50 for the promotion.

12. If the candidate be rejected after either examination, he forfeits the fees. The re-examination is free of charge.

The following are professors in the Medical Faculty of this University. *Ordinary Professors*: F. Miescher, senior, Pathological Anatomy; L. Rütinseyer, Comparative Anatomy and Zoology; A. Socin, Surgery and Clinical Surgery; H. Immermann, Medicine; J. Kollmann, Anatomy; J. J. Bischoff, Obstetrics and Gynæcology; F. Miescher, junior, Physiology; M. Roth, General Pathology and Pathological Anatomy; L. Wille, Psychiatry; H. Schiess, Ophthalmology. *Extraordinary Professors*: I. Hoppe, Therapeutics; E. Hagenback-Burckhardt, Diseases of Children; R. Massini, Polyclinic and Prescribing. There are also several private teachers. Lectures on subjects connected with Medicine are given in the Mathematical and Scientific Department of the Philosophical Faculty by *Ordinary Professors* J. Piccard, Chemistry; and W. Pfeffer, Botany. There were seventy-four students in the Faculty of Medicine in the Session 1877-8.

#### UNIVERSITY OF BERN.

THE Medical Faculty of this University is constituted of the following professors and about thirteen *doctents*. *Ordinary Professors*: G. Valentin, Physiology; C. Emmert, Public Medicine; C. Aeby, Human and Comparative Anatomy; T. Kocher, Surgery; T. Langhans, Pathological Anatomy; ———, Medicine; P. Müller, Midwifery; A. Vogt, Hygiene. *Extraordinary Professors*: E. Schärer, Psychiatry; E. Pflüger, Ophthalmology; M. von Nenchi, Physiological Chemistry. *Honorary Professors*: D. Jonquière, Materia Medica; R. Demme, Diseases of Children. Instruction in subjects connected with medicine is also given in the Mathematical and Scientific Department of the Philosophical Faculty by *Ordinary Professors* V. Schwarzenbach, Chemistry and Pharmacy; L. Fischer, Botany; *Extraordinary Professor*: T. Suder, Zoology.

Medical, surgical, obstetric, and special clinics, and physiological, pathological and chemical laboratories, etc., are connected with the University.

The number of students in the Faculty of Medicine in the Session 1877-8 was 133.

#### UNIVERSITY OF GENEVA.

THE University of Geneva grants the degrees of Bachelor in Medical Science and Doctor of Medicine.

The following classes of persons are admitted as students in the Faculty of Medicine: 1. Bachelors in Letters; 2. Bachelors in Science; 3. Students who have attended during two years lectures in the Section of Philosophy, and have undergone the examinations at the end of each year; 4. Pupils from the Classical Section of the Gymnasium, with certificates of Studies; 5. Swiss and strangers who give evidence of their studies by means of diplomas or certificates; 6. Persons who undergo satisfactory oral examinations in the subjects comprehended in the classical section of the Gymnasium. Persons who furnish evidence that they have studied abroad, for a year at least, in a corresponding faculty, may be inscribed in the Faculty of Medicine.

The course of study is as follows:—*First Year: Winter Session*: Botany (first part); Physics (first part); Comparative Anatomy or Zoology; Inorganic Chemistry; Practical Comparative Anatomy. *Summer Session*: Botany (second part); Physics (second part); Comparative Anatomy or Zoology; Organic Chemistry (first part); Practical Chemistry; Botanical Excursions. *Second Year: Winter Session*: Descriptive Anatomy (first part); Physiology (first part); Organic Chemistry (second part); Dissections. *Summer Session*: Descriptive Anatomy (second part); Physiology (second part); Practical Chemistry and Practical Comparative Anatomy. (Students are recommended to attend in addition courses of other subjects, such as Astronomy, Geography, Physics, Mineralogy, Geology, etc.) *Third Year: Winter Session*: Descriptive Anatomy (third part); Normal Histology; Dissection. *Summer Session*: Regional Anatomy; Embryogeny; Supplementary courses on subjects of the preceding years, on which the student's knowledge is weak; Practical Physiology, Histology, Comparative Anatomy, and Chemistry. (The examination for Bachelor in Medical Sciences is now undergone). *Fourth Year: Winter Session*: General Pathology; Internal Pathology; External Pathology; Dissection of Regions; Medical and Surgical Hospital Practice. *Summer Session*: Special Pathological Anatomy; Pathology Histology; Internal Pathology; External Pathology; Pharmacology; Medical and Surgical Hospital Practice; Exercises in the Laboratory of Pathological Histology. *Fifth Year: Winter Session*: Therapeutics; Hygiene; Legal Medicine; Theory of Obstetrics; Internal Pathology; External Pathology and Operations; Medical and Surgical Hospital Practice. *Summer Session*: Therapeutics; Legal Medicine; Internal Pathology; External Pathology; Medical and Surgical Hospital Practice; Operations. *Sixth Year: Winter and Summer Sessions*: Medical, Surgical, and Obstetrical Hospital Practice; Polyclinic; Ophthalmology, Psychology, etc. Repetitions preparatory to the examination for the Doctorate.

Persons who have satisfied the conditions laid down regarding the admission of students to the Faculty of Medicine may become candidates for the degree of Bachelor in Medical Science. Students who have undergone the recognised annual examinations in the Faculty of Medicine or of Sciences are exempt from oral examinations in the subjects in which they have already been examined; provided that the examinations have been undergone not more



than two years previously. Persons who produce diplomas or certificates giving evidence of their studies may be exempted from further examinations in the subjects in which they have already passed.

The following may become candidates for the degree of Doctor of Medicine: 1. Bachelors in Medical Science; 2. Persons who produce diplomas or certificates indicating that they have gone through an equivalent course of study. There are five examinations for the degree of Doctor of Medicine. *First Examination*: Human Anatomy and Histology; Physiology; Pathological Anatomy and General Pathology; a Necropsy, for which one hour is allowed; making an Anatomical Preparation, for which four hours are allowed. *Second Examination*: Medicine; Surgery; Operative Surgery; three Operations, and Application of Bandages. *Third Examination*: Hygiene; Therapeutics; Materia Medica and Pharmacology; Legal Medicine; a Medico-Legal Report on a real or supposed case, for which one hour is allowed. *Fourth Examination*: Clinical Examination of two medical and two surgical patients and of one case of labour (fifteen minutes being allowed for each case); Obstetrics, with operations on the mannikin; Discussion on each Clinical Case; Written Commentary on a Medical and a Surgical Case, two hours being allowed. *Fifth Examination*: Defence of a printed Dissertation, in the French language, on a subject in medical science chosen by the candidate, and previously communicated to the Faculty.

The examinations are public. Those for the degree of Bachelor are held at the beginning and end of the University year, and in the interval between the sessions. Applications for admission must be made to the Dean of Faculty of Medicine eight days before the day of examination. The examinations for the degree of Doctor take place, on the demand of the candidates, at times determined by the Faculty.

Before being admitted to examination, each candidate pays to the beadle 40 francs; and after the last examination, 100 francs must be paid to the Faculty of Medicine. In case of unsatisfactory examination, half of the first fee is returned, and the second is not paid.

The following course of lectures are delivered. *Winter Session*: Normal Anatomy, Professor Laskowski; Physiology, Professor Schiff; Histology, General Pathological Anatomy and Physiology, and Necropsies, Professor Zahn; Clinical Medicine, Professor Revellod; Clinical Surgery, Professor Julliard; Clinical and Theoretical Midwifery, Professor A. Vaucher; Polyclinic, Professor Vulliet; Internal Pathology, Professor D'Espine; External Pathology and Operative Surgery, Professor Reverdin; Therapeutics, Professor Prevost; Hygiene, Professor Dunant; Pharmacology, Professor Brun; Psychiatry, Dr. Olivet. The following are free courses: Gynæcology, Dr. Gautier, Dr. Devrient, and Dr. Cordès; General Pathology, Dr. Durante; Ophthalmology, Dr. Barde and Dr. Haltenhoff; Accouchements, Dr. Odier; Balneotherapy, Dr. Glatz; Functions of Central Nervous System, Dr. C. Geib; Dental Medicine and Surgery, Dr. Guillot. *Summer Session*: The same subjects are taught (other departments being taken) as in winter, except Histology, General Pathology, Pharmacology, and Balneotherapy, and the following are given in addition; Special Pathological Anatomy, Professor Zahn; Legal Medicine, Professor Gosse; Pathology of the Urinary Organs, Dr. E. Martin; Otology, Dr. Colladen.

The number of students in the Faculty of Medicine in the session 1877-78 was 72.

#### UNIVERSITY OF ZÜRICH.

THE following are the regulations for the degree of Doctor of Medicine.

1. In order to obtain the degree of Doctor of Medicine, the candidate must send to the dean a written memorial, accompanied by (a) evidence of attendance on lectures of Physics, Chemistry, Botany, Zoology, and Medical Subjects; (b) a dissertation on some subject in medical science, which, after approval, the candidate must have printed at his own expense.

2. The dissertation is delivered by the dean for examination to the teacher of the subject of which it treats, or to the member of the Faculty at whose suggestion it has been composed. A recommendatory opinion of the first examiner decides its acceptance; in this case, his name appears on the title when it is printed. If the first opinion be doubtful or unfavourable, the thesis must be circulated among all the members of the Faculty, and is only accepted if two-thirds of them give their written votes in its favour.

3. When the dissertation is approved, the candidate is admitted to examination for the degree. The first part is written, and the candidate has to answer two questions drawn by lot, one on Anatomy and Physiology, the other on Pathology and Therapeutics, Surgery, or Midwifery. The answers are circulated among the members of the Faculty, who, after examining them, express in writing their determination (by a simple majority) whether the candidate shall be admitted to the second (oral) examination. The oral examination comprises the above-named subjects, and also General Anatomy, Pathological Anatomy, Materia Medica, and Ophthalmic Medicine. The vote of two-thirds of the members of the Faculty present is necessary for the passing of this examination.

4. After the examination has been passed and two hundred printed copies of the dissertation have been delivered, the graduation takes place under the presidency of one of the ordinary professors of the Faculty. The ceremony consists of the following acts: a. Reading the candidate's *curriculum vitæ*; b. A contribution by the candidate on some subject in medicine or natural science; c. A disputation on theses on subjects in medicine or natural science, which theses the candidate has printed after their approval by the dean, and which are distributed among those present; d. Reception of the candidate as Doctor of Medicine, Surgery, and Midwifery.

5. To the graduate is delivered, in duplicate, an official diploma.

6. The fee consists of 350 francs (14*l.*) and 15 francs to the bedell; it is paid before the oral examination (if this be remitted, before graduation). There is no additional fee if it be necessary to repeat the examination. The fee is not returned if the candidate be definitely rejected. The sum of 100 francs is remitted to candidates who already possess a recognised diploma; and in such cases the Faculty may, by a majority of two-thirds, agree to omit the oral examination.

7. The Faculty has the power of granting the diploma of doctor *honoris causâ* for distinguished services to medicine.

## MEDICAL EDUCATION IN THE SCANDINAVIAN KINGDOMS.

### MEDICAL EDUCATION IN DENMARK.

IN Copenhagen, instruction in all departments of medicine, except clinical instruction and *post mortem* examinations, is carried on in the buildings which formerly constituted the Academy of Surgery. Here are the anatomical institution; collections of normal and pathological anatomy, and of surgical instruments; a physiological laboratory and museum; and a collection of *materia medica*: with rooms for the delivery of all lectures (except clinical).

Besides the lectures, practical instruction is given in dissections, in normal and pathological histology, in the application of chemistry to medicine and in operative surgery. Instruction in the making of necropsies is given in the *post mortem* room of King Frederick's Hospital. A pathological laboratory is a desideratum.

Clinical lectures and demonstration are given at King Frederick's Hospital, and in midwifery at the Communal Hospital. At the former there are two medical and two surgical wards. One medical and one surgical ward are specially appropriated to clinical instruction, under the care of teachers resident in the hospital; the other two wards are also to be used for clinical instruction, and three senior medical officers, if not already professors or lecturers in the Faculty of Medicine, are ranked as "provisional teachers" in the Faculty during their six years' tenure of office.

Clinical instruction in midwifery and the diseases of infants is given in the Royal Lying-in and Nursing Institution by the professor of the subject, who is also principal accoucheur.

The Communal Hospital, which is under the direction of the city authorities and the ministry of the interior, is connected with the Faculty of Medicine for the purposes of clinical instruction in syphilitic and cutaneous diseases, and in psychological medicine (until an asylum is established); also in clinical surgery, until the new surgical wards in the King Frederick's Hospital are opened.

The instruction in the Faculty of Medicine is given free of charge to the students, the professors receiving salaries rising from 1,600 to 3,000 rixdollars *per annum*. Private teaching is not therefore a very profitable occupation, except in subjects such as ophthalmology, for which no provision is made in the University.

The Academic year is divided into two sessions: the first extending from February 1 to June 9, and the second from August 23 to December 22. Examinations are held in January and June. The examination for the degree in Medicine is divided into two parts.

### MEDICAL EDUCATION IN SWEDEN.

THERE are three medical schools in Sweden: viz., in the Universities of Upsala and Lund, and the Karolina Medico-Chirurgical Institute in Stockholm. In the last-named school, there are professorships of anatomy, physiology, medical chemistry, and pharmacy, pharmacology, and pharmacodynamics, pathological anatomy, medicine, surgery, obstetrics, and diseases of children, and extraordinary professorships of forensic and state medicine, syphilidology, and psychological medicine. The institution of a

professorship of hygiene is contemplated. In Upsala the professorships are anatomy, physiology, experimental physiology, and medical physics, medical chemistry and pharmacy, pathological anatomy, medicine, surgery, and an extraordinary professorship of psychological medicine. Obstetric medicine is taught by the professor of surgery, and state medicine by the professor of anatomy. In Lund the professorships are anatomy, medical chemistry and pharmacy, pathological anatomy, medicine, and surgery. Physiology is taught by the professor of anatomy; *materia medica* by the professor of chemistry; obstetric medicine by the professor of surgery; and forensic and state medicine by the professor of pathological anatomy.

Besides the professors there are teachers or docents. Of these, the Karolina Institute possesses four, Upsala three, and Lund one. Amanuenses are also attached to most of the professorships; the clinical amanuenses must be licentiates in medicine, while the remainder may be candidates in medicine who have passed through the full course of clinical instruction.

The three institutions possess museums of normal and pathological anatomy, collections of chemical and pharmaceutical preparations and drugs, of surgical and obstetric instruments, etc. In the Karolina Institute there is a library containing works on all the branches of medicine, the librarian of which delivers lectures on medical history, free of charge.

In the anatomical department there are museums of normal and comparative anatomy. In Upsala and Lund, these museums are contained in buildings erected at a comparatively recent date as *salles d'anatomie*. In Stockholm the anatomical museum occupies a separate building on the same ground with the other buildings of the institute. In Upsala a histological institution, and in Lund one of pathological anatomy, are comprised in the anatomical department.

The Karolina Institute and the University of Upsala possess separate laboratories for medical chemistry. In Lund there is no special institution of the kind; but there is generally accommodation for medical students in the chemical laboratory.

Stockholm and Upsala possess pathological institutions in which necropsies of patients who have died in the neighbouring clinics are made; they contain also the museums of pathological anatomy; and, in connection with that at the Karolina Institute is a department of forensic medicine with a mortuary or *morgue*. In Lund the necropsies are made in the *post mortem* room at the Hospital.

There is a Physiological Institution at Upsala, in the same building with pathological anatomy. In Stockholm a spacious room in the museum buildings has been appropriated to physiology.

Upsala possesses a hospital of 150 beds, which is entirely at the disposal of the University for the purpose of clinical teaching. The professors of medicine and surgery are *ex officio* medical officers of the hospital. There are also an assistant-physician and an assistant-surgeon, with a medical and a surgical amanuensis or clerk. Of the 150 beds, 100 or a few more are generally occupied, and are divided among medical, surgical, syphilitic and obstetric cases. There are generally about 50 each of medical and surgical cases, 10 to 15 syphilitic, while the obstetric beds, 8 in number, contain usually from 2 to 6 patients. The assistant-physician and surgeon have each separate wards. The out-patient department is at present under the charge of one of the Univer-



sity teachers, who is also the town medical officer, and is utilised for the purpose of clinical instruction. There is also a clinical ward in the asylum at Upsala, in charge of the professor of psychological medicine.

In Lund, clinical instruction is given in the State Hospital, and also in the University Hospital. In the latter, there are 80 beds for medical and 80 for surgical cases, with 67 beds in the syphilitic and 8 in the obstetric departments. Of these, 40 beds in the medical and 40 in the surgical department are appropriated to clinical instruction, which is given by the professors of medicine and surgery. The obstetric department is also clinical; the syphilitic at present is not. Clinical instruction in the diseases of the eye is also given.

In Stockholm, the pupils of the Karolina Institution receive clinical instruction at the Seraphim Hospital, the Children's and Lying-in Hospitals, the Town and State Lock Hospital, and the Lunatic Asylum at Konradsberg.

At the Seraphim Hospital, there are two medical and two surgical wards, under the charge of the ordinary and adjunct professors of medicine and surgery; and also a small gynæcological ward, attended by the professor of obstetrics and gynæcology. It contains about 300 beds. An ophthalmic clinic is comprised in the surgical department; and the gynæcological clinic (of eight beds) is attached to the medical. There are a resident medical and resident surgical officer, who receive salaries.

The Lying-in Hospital or Obstetric Clinic, can accommodate thirty patients; twenty beds are generally occupied. The professor of obstetrics in the Karolina Institution is *ex officio* chief physician, and takes charge of the wards for eight months in the year, being replaced by the adjunct professor for the remaining four months.

The whole of the cases in the General Orphan Hospital are available for clinical instruction. The daily number of infants under one year old in the institution, is from 100 to 110; sometimes it has been as high as 240. Of these, 10 or 12 per cent. are generally on the sick-list. There are also about 80 children between one and fifteen years of age. The number of patients between these ages is about 30 daily; this apparently large proportion is explained by the fact that sick children are taken in from Stockholm and the neighbourhood. In addition, from 1,600 to 2,000 are attended yearly as out-patients. Clinical instruction is given by the professor of diseases of children for eight months in the year, and four months by his adjunct.

The Town and State Lock Hospital has 180 beds, of which on an average, 140 are occupied daily.

The Hospital for the Insane at Konradsberg has 220 beds, which are all available for clinical instruction. The professor of psychological medicine in the Karolina Institute is the chief physician.

#### MEDICAL EDUCATION IN NORWAY.

IN the University of Christiania, lectures are delivered on the following subjects: surgery, ophthalmic surgery, physiology, midwifery, and diseases of women and children, descriptive anatomy, forensic medicine, pathology, and therapeutics, hygiene, materia medica, general pathology, and pathological anatomy, surgical pathology, zoology, and chemistry. Clinical instruction is given in the General Hospital on surgery, ophthalmic surgery, medicine, diseases of the skin and syphilis; at the Lying-in and Children's

Hospital, on the diseases of women and children; at the Gansted Asylum and at the Christiania Lunatic Asylum, on mental diseases; and in the Town Hospital, on chronic diseases. Practical instruction is also given in chemistry, anatomy, and botany.

In the General Hospital and in the Lying-in Hospital, the rule is that the students act as clerks for two years; viz., as assistant-clerks for three months in the medical wards, and the same in the surgical wards; then as senior clerks for three months in the wards for skin-diseases, six months in the medical and six in the surgical wards, and two or three months in the Lying-in Institution and Children's Hospital.

#### MEDICAL DEGREES IN BELGIUM.

DEGREES in Medicine are granted by the Universities of Brussels, Liège, and Louvain.

#### UNIVERSITY OF BRUSSELS.

By the regulations of the University of Brussels, British and other medical practitioners, provided with proper qualifications, are admitted to examination before the Faculty for the degree of M.D. Residence is not required from such as are unable to absent themselves long by reason of their professional occupations.

No degrees, however, are granted *in absentia*, and candidates must come over in person and have their names inscribed in the books of the University. The fees are, for inscription of name, 215 fr. (8*l.* 12*s.*); for examinations, 315 fr. (12*l.* 12*s.*); for registration of diploma, 10 fr. (8*s.*); total, 540 fr. (21*l.* 12*s.*). The examination consists of three parts: 1. General Therapeutics, including Pharmacodynamics (proportions of doses), Special Pathology and Therapeutics of Internal Diseases, General Pathology, and Pathological Anatomy. 2. Surgical Pathology, Theory of Midwifery, Public and Private Hygiene, Medical Jurisprudence. 3. Examination at the Hospital of one or two patients under Medical and Surgical Treatment; Examination in Midwifery, consisting in Obstetrical Operations on the *mannequin* (model of pelvis); Examination in Operative Surgery, consisting of some of the usual operations on the dead subject, such as amputation, ligature of an artery, etc.

Great importance is attached to practical knowledge, but candidates must also prove that they possess positive theoretical science.

Examinations take place at any time between October 15 and June 20, except during the Christmas and Easter vacations. They are *vivâ voce* and written, but candidates may be exempted from the latter and confine themselves to the *vivâ voce* tests. Candidates must exhibit their qualifications or diplomas.

The three examinations may be got through in a week, allowing a day's interval between each two tests. Saturday is the most eligible day for arriving, for candidates for whom time is an object. The delay of a week is, however, never exceeded by more than a day or two.

The examinations are conducted in English through the medium of an interpreter, for such candidates as are not familiar with the French language.

The degrees granted by the faculty are merely scientific titles, and do not confer the right to practise medicine in Belgium.

### UNIVERSITY OF LIÈGE.

THE University grants a degree in Medicine, Surgery, and Midwifery, which can only be obtained after passing three examinations, in the French language, in natural sciences and medical subjects.

The first examination includes the following subjects: General Chemistry, Logic, Psychology, Moral Philosophy, Experimental Physics, Elements of Zoology, Elements of Botany (comprising the medical category), Elementary Geology and Mineralogy. This is called the examination for candidates in natural sciences.

The second examination, which is for candidates in medicine, includes, Elements of Comparative Anatomy, Descriptive and Regional Anatomy, Human Physiology, and Pharmacology.

The third examination, which, when successfully passed, entitles the candidate to the Doctorate, includes the following subjects, viz., General Pathology, Pathological Anatomy, Special Pathology and Therapeutics, Mental Maladies, General Therapeutics, Surgical Pathology and Ophthalmology, Theory and Practice of Midwifery (including operations), Public Hygiene, Legal Medicine, Clinical Medicine, Clinical Surgery, Surgical Operations.

The fees are—for the first examination, 80 fr.; second, 40 fr.; doctor in medicine, 240 fr.; total, 360 fr.

### UNIVERSITY OF LOUVAIN.

THIS University, before granting the usual degree, insists upon compliance with the following conditions, viz.:

1. An examination in one group (or branch) of the sciences:

2. An examination upon all medical subjects, in the French language.

The sciences are divided into three groups—Mathematics, Physico-chemicals, and Natural Sciences.

Each examination in any of the sciences is divided into three, viz.: that for the candidate, that for the license, and that for the doctorate.

The University of Louvain consists of several colleges, and the buildings of the Halles, and contains a library of 70,000 vols.

### MEDICAL DEGREES IN ITALY.

THE Italian universities at which degrees in medicine are granted are, Bologna, Catania, Padua, Palermo, Pavia, Pisa, Rome, Siena, and Turin. There is also a preparatory School of Medicine at Ferrara.

The regulations for Graduation in Medicine in the Universities of Italy are as follows.

1. The Medico-Chirurgical Faculty has the duty of giving instruction in all subjects relating to medicine and surgery, promoting the cultivation of all that is known in that field, and qualifying for the exercise of the medical profession in its various branches. 2. The course of medical and surgical study extends over six years, at the end of which free license to practise is granted. 3. The following courses of instruction are obligatory: General

Chemistry, Organic and Inorganic; Botany; Zoology, with Comparative Anatomy and Physiology; Experimental Physics; Normal Human Anatomy (i.e., Histology, Descriptive and Topographic Anatomy, and Dissection); Human Physiology; General Pathology; Pathological Anatomy (demonstrations and exercises); Materia Medica and Experimental Pharmacology; Special Medical Pathology (or Principles and Practice of Medicine); Special Surgical Pathology (Surgery); Clinical Medicine and Exercises in Semiotics; Clinical and Operative Surgery; Theory and Practice of Ophthalmic Surgery; Theory and Practice of Diseases of the Skin and Syphilis; Midwifery and Clinical Midwifery; Forensic Medicine and Public Hygiene; Theoretical and Clinical Psychiatry (where opportunities exist). 4. The obligatory courses must each be attended one year; except Pathological Anatomy, of which two years are required, and Human Anatomy and Clinical Medicine and Surgery, each three years. 5. The following courses are non-obligatory or complementary; Medical Chemistry; Experimental Toxicology; Critical History of Medicine. 6. Besides these, other free courses may also be given. 7. There shall be three biennial examinations in the Faculty of Medicine; the first for "promotion"; the second for "licence"; the third for the degree of "laureate", with a diploma conferring full licence to practise. 8. In the Universities of Pisa and Siena the licentiate shall have the title of laureate of the first stage (*laurea di primo grado*). 9. In order to be admitted to the first examination (*promozione*) the candidate must have been a student at the University at least two years, and have diligently attended the Courses of Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, Experimental Physics, Human Anatomy, and any subjects of instruction that he may choose, so as to make up eighteen hours of instruction per week. 10. The subjects of examination shall be Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, and Experimental Physics. The Examining Board shall consist of the official teachers of the subjects of examination, with one or two additional examiners not belonging to the teaching body. On the proposal of the Faculty and with the consent of the Minister, the examination for promotion may be divided into two parts, one to be held at the end of the first year, and the other at the end of the second year. At the beginning of each scholastic year, the Faculty shall determine what courses are to be followed and when. 11. The candidate for admission to the several examinations (licence) must have passed the first examination, have attended the University during two other years, and have diligently attended courses of Human Anatomy and Physiology, General Pathology, Practical Pathological Anatomy, Materia Medica and Experimental Pharmacology, Special Medical Pathology, Special Surgical Pathology, Clinical Medicine, and Clinical Surgery. The examining board shall be composed of the official teachers of the subjects mentioned, with one or two assessors not belonging to the teaching body. The examination shall be oral, and practical as regards Human Anatomy and Materia Medica. 13. A candidate for admission to the third examination (*laurea*) must have passed the second examination, have subsequently been a student at the University during two years, and have diligently attended the courses of Clinical Dermatology and Syphilology, Clinical Ophthalmic Surgery, Midwifery and Clinical Midwifery, Clinical Psychiatry, Exercises in Patho-



logical Anatomy, Clinical Medicine and Surgery, Operative Surgery, Forensic Medicine and Hygiene, and voluntary courses so as to make up eighteen hours of instruction each week. 14. The candidate has to undergo an examination on the dead body and two clinical examinations. 15. The examination on the dead body shall be conducted by a subcommittee consisting of all the professors of Operative Surgery, Pathological Anatomy, and Forensic Medicine, with one or two assessors not belonging to the official teaching body. 16. In this examination, the candidate will perform on the dead body a surgical operation, the nature of which will be decided by lot from a series prepared by the subcommittee. He will also perform a necropsy, and draw up a description of the appearances seen. Finally, he will answer the questions put to him by the examiners, and especially on the results of the necropsy, which are asked by the professor of forensic medicine. 17. The first clinical examination will be conducted in the presence of a subcommittee consisting of the professors of Clinical Dermatology and Syphilology, Clinical Obstetrics, Clinical Psychiatry, Clinical Ophthalmology, and Forensic Medicine, with one or two extra-professorial assessors. 18. In this examination the candidate will examine four cases of disease selected from the four special classes, which have not previously been examined or treated in the clinical wards, and will give his opinion on the diagnosis, prognosis, and treatment. He will afterwards answer the questions and observations of the examiners, and especially will reply to the questions put by the professor of Forensic Medicine on the obstetric and psychological cases. 19. The several clinical examinations shall be conducted in the presence of a subcommittee consisting of the Professors of Clinical Medicine, Clinical Surgery, Medicine, Surgery, and Forensic Medicine, with one or two extra-professorial assessors. 20. The candidate shall examine, in the presence of the subcommittee, four patients, two medical and two surgical, who have not yet been examined or treated in the wards, and shall write a description of the cases. He shall, finally, answer the questions asked by the examiners. 21. A student must have passed each stage of the third examination before he can be admitted to the next stage. 22. In each examination, a student rejected in one subject alone may present himself for examination in this subject only on a future occasion; but if he be rejected in two or more subjects, the whole examination must be repeated. 23. The three stages of the third examination having been passed, the three subcommittees unite to form a committee presided over by the President of the Faculty, and will judge of the merits of the candidates. The successful candidates will be declared doctors in medicine and surgery, and the President will refer them to the Rector in order that they may receive the diploma of laureate.

Foreigners desirous of obtaining medical degrees in Italian Universities must produce a diploma or degree obtained at some noted foreign university, and must at the same time produce satisfactory proof that they have actually gone through all the studies and passed the examinations required for that degree. They must also pass the ordinary examinations for the medical degree and pay the respective fees. The examinations are usually conducted in the Italian or the Latin language.

## MEDICAL EDUCATION IN THE UNITED STATES.

THE United States possess a very large number of institutions empowered by charter to grant the degree of doctor of medicine; there being, in some instances, special colleges and schools of medicine and surgery, and in others the medical departments of Universities. We are indebted to an interesting article on Literature and Institutions, by Dr. J. S. Billings, of the United States Army, published as a part of the *Century of American Medicine*, for a carefully prepared list of the medical schools. In reproducing it, we omit a number of institutions—twenty-five in all—which have ceased to grant medical degrees. The dates indicate the years in which the degrees in medicine were first conferred by the respective bodies.

*Alabama*.—Medical College of Alabama (Mobile): 1860.

*California*.—Medical College of the Pacific University (City) College (San Francisco): 1859.—University of California (San Francisco): 1865.

*Connecticut*.—Medical Department of Yale College (New Haven): 1814.

*District of Columbia*.—National Medical College, Medical Department of Columbian University (Washington): 1826.—Georgetown University (Washington): 1852.—Howard University (Washington): 1871.

*Georgia*.—Medical College of Georgia (Augusta): 1833.—Savannah Medical College: 1854.—Atlantic Medical College: 1855.

*Illinois*.—Rush Medical College, Medical Department of University of Chicago: 1844.—Chicago Medical College, Medical Department of North Western University: 1860.

*Indiana*.—Medical College of Evansville: 1850.—Indiana Medical College (Indianapolis): 1870.—Indiana College of Physicians and Surgeons (Indianapolis): 1875.

*Iowa*.—College of Physicians and Surgeons (Keokuk): 1850.—Iowa State University (Iowa City): 1871.

*Kentucky*.—University of Louisville: 1838.—Kentucky School of Medicine (Louisville): 1851.—Louisville Medical College: 1870.—Hospital College of Medicine, Medical Department of Central University (Louisville): 1875.

*Louisiana*.—University of Louisiana (New Orleans): 1835.—Charity Hospital Medical College of New Orleans: 1876.

*Maine*.—Bowdoin College and Medical School of Maine: 1821.

*Maryland*.—University of Maryland (Baltimore): 1811.—Washington University School of Medicine (Baltimore): 1828.—College of Physicians and Surgeons (Baltimore): 1873.

*Massachusetts*.—Harvard University (Boston): 1785.

*Michigan*.—University of Michigan (Ann Arbor): 1851.—Detroit Medical College: 1860.

*Missouri*.—Missouri Medical College (St. Louis): 1841.—St. Louis Medical College: 1843.—Kansas City College of Physicians and Surgeons: 1870.

*New Hampshire*.—Medical School of Dartmouth College (Hanover): 1798.

*New York*.—College of Physicians and Surgeons of the City of New York: 1769.—Albany Medical College: 1839.—University of the City of New York:

1842.—University of Buffalo: 1847.—Long Island College Hospital (Brooklyn): 1860.—Bellevue Hospital Medical College (New York): 1862.—College of Medicine of Syracuse University: 1873.

*Ohio*.—Medical College of Ohio (Cincinnati): 1821.—Starling Medical College (Columbus): 1836.—Cleveland Medical College: 1844.—Cincinnati College of Medicine and Surgery: 1852.—Miami Medical College (Cincinnati): 1853.—University of Wooster (Cleveland): 1865.

*Oregon*.—Williamette University (Salem): 1867.

*Pennsylvania*.—University of Pennsylvania (Philadelphia): 1768.—Jefferson Medical College (Philadelphia): 1826.

*South Carolina*.—Medical School of the State of South Carolina (Charleston): 1825.—University of South Carolina (Columbia): 1868.

*Tennessee*.—University of Nashville: 1852.—Vanderbilt University (Nashville): 1875.

*Texas*.—Galveston Medical College: 1866.—Texas Medical College and Hospital (Galveston): 1874.

*Vermont*.—University of Vermont and State Agricultural College (Burlington): 1823.

*Virginia*.—University of Virginia (Charlottesville): 1828.—Medical College of Virginia (Richmond): 1839.

The article in the *American Journal of the Medical Sciences* from which we have already quoted contains the following remarks on medical education in America, in a review of an introductory address on the subject by Professor William Pepper of the University of Pennsylvania.

"There are now 65 medical schools in the United States, besides those devoted to homeopathy, eclectic and botanic systems, etc. During the winter of 1876-77, these 65 schools had 7,141 students, of whom 2,313 graduated as doctors of medicine in the spring of 1877. There were employed in these schools 515 professors, and 279 other teachers with various titles.

"In five of these schools there is a graded course of three years, and in two a preliminary examination is required, although of a low grade. Of the remaining schools about 15 are doing fairly good work, work as good as there is a demand for, and are prepared to improve as rapidly as public opinion and financial necessities will permit.

"The rest of the schools are doing poor work, and will probably continue to do it. Many of them owe their existence to the desire of two or three gentlemen to advertise themselves without coming under the ban of the Code of Ethics. What an individual may not do, is yet permissible to a corporation. The profit from such schools does not come from the fees of the student, but from the advertisement, and from the consultation cases which the graduates bring to the professors. They can well afford, therefore, to accept low tuition fees, or even to teach without fees. It is useless to discuss methods of improvement for this class of schools; the only useful reform is one that will put an end to their existence.

"The amount of general education and time of study required by our medical schools are about the same as, or perhaps a little less than, those required for veterinary medicine abroad.

"It is assumed that students coming up for their first course have been reading with a private preceptor for one year.

"But those subjects (says Dr. Pepper) which

should be studied first are precisely those which require demonstration by means which are not at the command of private teachers, and especially of those in the rural districts. The result is that the medical student, instead of studying chiefly anatomy, chemistry, and physiology, does his reading on these subjects in a mechanical, listless way, and gives his real attention to works on practical medicine and surgery, because he has some cases shown him almost every day.

"This 'American system', as it is called, although it is only entitled to this name because it has been retained in America after the rest of the world had dropped it, is really one of the great causes of difficulty in the way of putting our systems of medical education on a satisfactory footing. The day of apprenticeships and private pupilage has passed for all students who know their own true interests, since the time which they thus spend is for the most part wasted, being taken from the time which should be given to laboratories, hospitals, and lectures. Many members of the medical profession, however, are, and will be, reluctant to give up this business of preceptorship. 'It adds a little to their income, and more to their importance; it makes them professors in a small way, puts some patronage into their hands, gives them an office boy or two, and need be no trouble unless they choose, and in most cases they do not choose.'

"All attempts to compare the practical skill of, or the results obtained by, the physicians of the United States with those of other countries are worse than useless, nor in fact is it probable that the methods of treatment differ much; for, thanks to medical journalism, the art is now cosmopolitan, and a new remedy reported from England or Germany will very speedily be tried here. As far as surgery, and especially what may be called mechanical surgery, is concerned, the comparison is certainly favourable to this country. When, however, we come to compare our medical literature with that of other countries, the result is not gratifying to our national pride; and, after all, it is by this that we must be judged. A 'doctor' should be a teacher as well as a practitioner, and his duties do not end with the cure or death of his patient. He ought, for the sake of the profession and the public, to set forth the how and the why of his results.

"Defective education shows its effects in omissions as well as commissions, and in this respect we can only plead guilty. The various attempts which our physicians have made to produce a change for the better have not as yet produced any striking results, but the attention of the non-medical public, which is after all the party most immediately interested, and is probably the only source from which effectual reform can be expected, has been to some extent aroused, so that it is probable that in the course of time our legislators will provide some means by which the public can distinguish the properly trained physician. It is very evident that our young men must be much more studious and intelligent than those of France, Germany, Sweden, or Great Britain, or else that they must be less well informed on graduation, since but two years of study are required here for that purpose. It is also clear that the course of reform in our medical education has been something like that of reform in the civil service. Every one agrees that it is a most desirable thing, but the majority is opposed to any particular mode of effecting it.

"The defects in the American system of medical



education are summed up by Dr. Pepper as follows: 1. The absence of a preliminary examination; 2. The very short term of studies required; 3. The want of personal training in the practical branches; 4. The absence of any grading of the curriculum; 5. The examination of the candidates for the degree by those having a direct pecuniary interest in their success.<sup>2</sup>

"The evil results of these defects upon which he lays most stress is the over-production of medical men. He estimates that, in the United States the proportion of physicians to population is 1 to 600, while in Austria it is 1 to 2,500, in France 1 to 1,814, in the German Empire 1 to 3,000, in Great Britain 1 to 1,672, and in Sweden 1 to 7,500. These estimates are based on special official reports obtained through the State Department, and the summary of these reports, given in an appendix to the address, forms a very valuable contribution to the statistics of this subject."

#### HARVARD UNIVERSITY, BOSTON.

THE following is the staff of professors in the medical department of this University: Dr. Calvin Ellis (Clinical Medicine), Dean; Dr. John B. S. Jackson (Pathological Anatomy); Dr. Oliver W. Holmes (Anatomy); Dr. Henry J. Bigelow (Surgery); Dr. John E. Tyler (Mental Diseases); Dr. John P. Reynolds (Obstetrics); Dr. Francis Minot (Theory and Practice of Medicine); Dr. Henry W. Williams (Ophthalmology); Dr. David W. Cheever (Clinical Surgery); Dr. James C. White (Dermatology); Dr. Robert T. Edes (Materia Medica); Dr. Henry P. Bowditch, (Physiology); Dr. Edward S. Wood (Chemistry); Dr. Reginald H. Fitz (Pathological Anatomy—Assistant). The following are Instructors: Dr. Charles B. Porter (Surgery); Dr. F. I. Knight (Percussion, Auscultation, and Laryngoscopy); Dr. J. Collins Warren (Surgery); Dr. Wm. L. Richardson (Obstetrics); Dr. Thomas Dwight (Histology); Dr. W. H. Baker (Gynæcology); Dr. W. B. Hills (Chemistry); Dr. G. H. F. Markoe (Materia Medica). Dr. H. H. A. Beach is Assistant Demonstrator of Anatomy; Dr. F. W. Draper and Dr. C. F. Polson lecture on Hygiene. Special Clinical Instruction is given—in Syphilis, by Drs. F. B. Greenough and E. Wigglesworth; in Otology, by Drs. J. O. Green and C. J. Blake; in Diseases of Children by Drs. C. P. Putnam and J. P. Oliver; and in Diseases of the Nervous System by Drs. S. G. Webber and W. J. Putnam.

Persons who hold no degree in arts or science must pass an *examination for admission* to this School, in Latin, in the elements of Physics, and in English. French or German will be accepted instead of Latin.

Instruction is given by lectures, recitations, clinical teaching, and practical exercises, distributed throughout the academic year. The year is divided into two equal terms, either of which is more than equivalent to the former "Winter Session", as regards the amount and character of the instruction. The course of instruction extends over three years, and has been so arranged as to carry the student progressively and systematically, from one subject to another. In the subjects of anatomy, histology, chemistry, and pathological anatomy, laboratory work is largely substituted for, or added to, the usual methods of instruction.

Instead of an examination at the end of three years' period of study, a series of written examina-

tions on all the main subjects of medical instruction has been distributed through the whole three years; and every candidate for the degree of Doctor of Medicine must pass a satisfactory examination in every one of the principal departments of medical instruction during his period of study.

The course of study is arranged as follows:—*First Year*: Anatomy, Physiology, and General Chemistry. *Second Year*: Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, Surgery, and Clinical Surgery. *Third Year*: Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery. Students are divided into three classes, according to their time of study and proficiency. Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the second or third year's class must pass an examination in the branches already pursued by the class to which they seek admission. Examinations are held in the following order:—End of first year—Anatomy, Physiology, and General Chemistry; end of second year—Medical Chemistry, Materia Medica, and Pathological Anatomy; end of third year—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

Every candidate for a degree in medicine must be twenty-one years of age, must have studied medicine three full years, have spent at least one continuous year at this School, have passed the required examinations, and have presented a thesis.

*Course for Graduates*.—For the purpose of affording to those already Graduates of Medicine additional facilities for pursuing clinical, laboratory, and other studies, in such subjects as may specially interest them, the Faculty has established a course which comprises the following branches: Histology; Physiology; Medical Chemistry; Pathological Anatomy; Surgery; Auscultation, Percussion, and Laryngoscopy; Ophthalmology; Dermatology; Syphilis; Psychological Medicine; Otology; Electrotherapeutics; Gynæcology; and Obstetrics. Single branches may be pursued. Graduates of other Medical Schools who may desire to obtain the degree of M.D. in the University, will be admitted to examination for the degree after a year's study in the Graduates' course.

*Fees*.—The fees are: for Matriculation, 5 dollars; for the year, 200 dollars; for one term alone, 120 dollars; for Graduation, 30 dollars. For Graduates' course, the fee for one year is 200 dollars; for one term, 123 dollars; and, for single courses, special fees. Payment is made in advance.

#### UNIVERSITY OF THE CITY OF NEW YORK.

THIS University has, from 1842 to 1876, granted 3,393 degrees in Medicine. The professors in the Faculty of Medicine are: Dr. Alfred C. Post, *Emeritus* Professor of Clinical Surgery, and President; Dr. Charles L. Pardee (Diseases of the Ear—Dean); Dr. John C. Draper (Chemistry); Dr. Alfred L. Loomis (Pathology and Practice of Medicine); Dr. W. Darling (Anatomy); Dr. W. H. Thomson (Materia Medica and Therapeutics); Dr. J. W. S. Arnold (Physiology and Histology); Dr. John T. Darby (Surgery); Dr. J. Williston Wright (Obstetrics and Diseases of Women and Children); Dr. Faneuil D.

Weisse (Practical and Surgical Anatomy). Dr. Joseph W. Winter is Demonstrator of Anatomy.

A Post-Graduate Course of Lectures is delivered by the following professors: Dr. D. B. St. John Roosa (Ophthalmology); Dr. Wm. A. Hammond (Diseases of the Mind and Nervous System); Dr. Stephen Smith (Orthopædic Surgery); Dr. J. W. S. Gourley (Diseases of the Genito-Urinary System); Dr. Montrose A. Pallen (Gynæcology); Dr. Henry G. Piffard (Dermatology); Dr. A. E. Macdonald (Medical Jurisprudence); Dr. Joseph W. Howe (Clinical Surgery); Dr. L. A. Stimpson (Pathological Anatomy).

The Collegiate Year is divided into three Sessions; a Preliminary Session, a Regular Winter Session, and a Spring Session.

The Professors of the Practical Chairs are connected with the Bellevue and Charity Hospitals, and the University Students are admitted to all the Clinics given therein, free of charge.

The Winter Session commences on October 2, 1878, and will end about March 1, 1879.

In addition to daily Hospital Clinics, there are eight Clinics each week in the College. Five Didactic Lectures are given daily in the College building, and Evening Recitations are conducted by the Professors of Chemistry, Practice, Anatomy, Materia Medica, Physiology, Surgery, and Obstetrics, upon the subjects of their lectures.

In the Spring Session, which will commence early in March and last about twelve weeks; besides the daily Clinics, Recitations, and Special Practical Courses, there are given Lectures on Special Subjects by the members of the Post-Graduate Faculty.

The Dissecting-room is open throughout the entire Collegiate year; material is furnished free of charge.

Students who have studied two years may be admitted to examination in Chemistry, Anatomy, and Physiology, and, if successful, will be examined at the expiration of their full course of study, on Practice, Materia Medica and Therapeutics, Surgery, and Obstetrics; but those who prefer it may have all their examinations at the close of their full term.

*Fees.*—These are: for Course of Lectures, 140 dollars; Matriculation, 5 dollars; Demonstrator's Fee (including material for dissection), 10 dollars; Graduation Fee, 30 dollars; Post-Graduate Certificate, 30 dollars.

#### BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

THE teaching staff of the College consists of the following professors:—Dr. Isaac E. Taylor (Obstetrics and Diseases of Women)—*Emeritus*; Dr. James R. Wood (Surgery)—*Emeritus*; Dr. Fordyce Barker (Clinical Midwifery and Diseases of Women); Dr. Austin Flint (Principles and Practice of Medicine, and Clinical Medicine); Dr. W. H. Van Buren (Principles and Practice of Surgery, Diseases of Genito-Urinary System, and Clinical Surgery); Dr. Lewis A. Sayre (Orthopædic Surgery, and Clinical Surgery); Dr. Alexander B. Mott (Clinical and Operative Surgery); Dr. Wm. T. Lusk (Obstetrics and Diseases of Women and Children, and Clinical Midwifery); Dr. William M. Polk (Materia Medica and Therapeutics, and Clinical Medicine); Dr. Austin Flint, jun. (Physiology and Physiological Anatomy); Dr. Joseph D. Bryant (General, Descriptive, and Surgical Anatomy); Dr. R. Ogden Doremus (Chemistry and Toxicology); Dr. Edward G. Janeway

(Pathological Anatomy and Histology, Diseases of the Nervous System, and Clinical Medicine); Dr. Henry D. Noyes (Ophthalmology and Otology); Dr. John P. Gray (Psychological Medicine and Medical Jurisprudence); Dr. Erskine Mason (Clinical Surgery); Dr. Edward L. Keyes (Dermatology, and Adjunct to the Chair of Principles of Surgery); Dr. J. L. Smith (Diseases of Children); Dr. L. M. Yale (Lecturer Adjunct upon Orthopædic Surgery). A distinctive feature of the method of instruction in this College is the union of clinical and didactic teaching. During the Regular Winter Session, in addition to four didactic lectures on every week-day, except Saturday, two or three hours are daily allotted to clinical instruction. The Spring Session continues from March 1 to June 1. During this Session, daily Recitations from Text-Books in all the Departments are held by a corps of examiners. Regular Clinics are also given in the Hospital and College Building.

*Fees.*—1. For the Regular Session: all the lectures, including clinical lectures, 140 dollars; Matriculation fee, 5 dollars; Demonstrator's ticket (including material for dissection), 10 dollars; Graduation fee, 30 dollars. 2. For the Spring Session: Matriculation (ticket good for the following winter), 5 dollars; Recitations, Clinics, and Lectures, 35 dollars; Dissection (ticket good for the following winter), 10 dollars.

Students who have attended two full Winter Courses of Lectures may be examined at the end of their second course upon Materia Medica, Physiology, Anatomy and Chemistry, and, if successful, they will be examined at the end of their third course upon Practice of Medicine, Surgery, and Obstetrics only.

#### UNIVERSITY OF PENNSYLVANIA.

THE Medical Department of this University is the oldest medical school in America, having been established in 1765 by Drs. John Morgan and Wm. Shippen, on the plan of the Edinburgh University, of which the founders were graduates. The Professors are: Dr. Joseph Leidy (Anatomy); Dr. R. A. Penrose (Obstetrics and Diseases of Women and Children); Dr. A. Stillé (Medicine and Clinical Medicine); Dr. D. H. Agnew (Surgery and Clinical Surgery); Dr. H. C. Wood (Materia Medica and Pharmacy, and Nervous Diseases—Clinical); Dr. W. Pepper (Clinical Medicine); Dr. W. Goodell (Clinical Gynæcology); Dr. J. Tyson (General Pathology and Morbid Anatomy); Dr. T. G. Wormley (Chemistry); Dr. J. Ashhurst, jun. (Clinical Surgery); Dr. H. Allen (Physiology); Dr. W. F. Norris (Diseases of the Eye—Clinical); Dr. G. Strawbridge (Diseases of the Ear—Clinical); Dr. L. A. Duhring (Diseases of the Skin—Clinical).

Besides these, the following *emeritus* professors belong to the Medical Faculty; Dr. G. B. Wood (Medicine); Dr. Henry H. Smith (Surgery); Dr. Francis G. Smith (Institutes of Medicine); Dr. John Neill (Clinical Surgery).

Candidates for the degree must attend three Winter Courses of five months each, consisting of Didactic Lectures, Clinical Lectures, and practical work in laboratories and hospitals. The curriculum is as follows. *First Year:* Anatomy, Histology, Materia Medica and Pharmacy, General Chemistry, Physiology, General Pathology, and Morbid Anatomy; Final Examinations in General Chemistry, and Materia Medica. *Second Year:* Anatomy, Topogra-



phical Anatomy, Medical Chemistry, Physiology, General Pathology and Morbid Anatomy, Therapeutics, Obstetrics, Theory and Practice of Medicine, Surgery, Clinical Medicine and Clinical Surgery; Final Examinations in Anatomy, Medical Chemistry, Physiology, General Pathology and Morbid Anatomy. *Third Year.* Topographical Anatomy, Theory and Practice of Medicine, Surgery, Obstetrics, Therapeutics, Operative Surgery, Minor Surgery and Bandaging, Diseases of Women and Children, Didactic Gynecology, Bedside Instruction in Practical Medicine and Surgery, Practical Ophthalmology, Otology, Dermatology, and Electro-Therapeutics; Clinical Medicine and Surgery, and Special Clinics (Nervous Diseases, Diseases of Skin, Eye, Ear, and of Women and Children); Final Examinations in Therapeutics, Theory and Practice of Medicine, Surgery, and Obstetrics.

Great clinical facilities are afforded by the University, Philadelphia, and Pennsylvania Hospitals.

Students who have attended one course in a regular medical school (homœopathic or "eclectic" school not being recognised) will be admitted as students of the second course, after an examination in General Chemistry and *Materia Medica* and Pharmacy. Students who have attended two courses in a regular medical school, will be admitted as students of the third course after examination in General and Medical Chemistry, *Materia Medica* and Pharmacy, Anatomy, and Physiology. Graduates of other regular medical schools in good standing will be admitted as students of the third course without examination.

There are laboratories of Chemistry, Pharmacy, Histology, Physiology, and Pathology.

The fees, payable in advance, are: First Course of Lectures, including matriculation and dissection, 155 dollars; Dissecting material free. Second Course, 140 dollars; Third Course, 100 dollars; Graduation fee, 30 dollars.

An *Auxiliary Department of Medicine* was instituted in 1865, for the purpose of supplementing the ordinary course of medical instruction by lectures, given during the Spring months on certain collateral branches of Science. Lectures are delivered in Comparative Anatomy and Zoology, Medical Jurisprudence and Toxicology, Mineralogy and Geology, Botany, and Hygiene. The lectures of this department are free to all the matriculates and graduates of the Medical Department of the University. To others, a fee of ten dollars is charged for each professor's ticket, or thirty-five dollars for the whole course. The degree of Doctor of Philosophy (Ph.D.) is conferred on graduates of the Medical Department of the University, or of other medical schools on the *ad eundem* list, who shall have attended two full courses of lectures in the Auxiliary Department of Medicine, and passed a satisfactory examination. The Faculty desire it to be understood that their examination standard for this degree is necessarily high.

*Dental Department.*—The Trustees have established a Dental Department. The professors include those of Anatomy, Physiology, Chemistry, and *Materia Medica*, in the Medical Department, with Dr. Charles J. Essig, Professor of Mechanical Dentistry and Metallurgy, and Dr. Edwin T. Darby, Professor of Operative Dentistry. Two years' study, two courses of lectures, and examination at the end of the second course, are the requirements for graduation. Graduates of the Dental Department of the University of Pennsylvania may become candidates for the degree of Doctor of Medicine (M.D.),

after attending the third year course of lectures in the Medical Department of the University of Pennsylvania; but the Secretary of the Department of Medicine must be informed of the intention of the student to take the medical degree at or before the beginning of his second course of lectures, in order that this course may be so modified that it may be a full medical as well as dental course.

*Fees.*—Matriculation, 5 dollars; one course of lectures, 100 dollars; Dissecting fee, 10 dollars; Graduation fee, 30 dollars.

### JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

The lectures during the coming Winter Session will be delivered by the following professors: Dr. Samuel D. Gross (Institutes and Practice of Surgery); Dr. Ellerslie Wallace (Obstetrics and Diseases of Women and Children); Dr. John B. Biddle (*Materia Medica* and General Therapeutics); Dr. J. Aitken Meigs (Institutes of Medicine and Medical Jurisprudence); Dr. J. M. Da Costa (Practice of Medicine); Dr. W. H. Pancoast (General, Descriptive, and Surgical Anatomy); Dr. Robert E. Rogers (Medical Chemistry and Toxicology); Dr. Joseph Pancoast is *emeritus* professor of Anatomy.

Continuous Instruction is given throughout the year (with the exception of the months of July and August), which is free to the matriculates of the Winter Session. The following special subjects are taught during the Preliminary Course in September:—Medical Jurisprudence, by Professor Meigs; Dermatology and Syphilitic Disease, by Dr. F. F. Maury, Surgeon to the Philadelphia Hospital; Pathological Anatomy, by Dr. Longstreth, Pathologist to the Pennsylvania Hospital; Operative Surgery, with Operations on the Cadaver, by Dr. John H. Brinton, Surgeon to the Philadelphia Hospital; Diseases of the Urino-Genital Organs, by Dr. S. W. Gross, Surgeon to the Philadelphia Hospital; Ophthalmology is treated both clinically and didactically during the entire course, by Dr. William Thomson, Surgeon to the Wills Ophthalmic Hospital; Laryngoscopy, with Disease of the Throat, by Dr. J. Solis-Cohen.

The Demonstrator of Surgery, Dr. J. E. Mears, delivers a distinct course of Demonstrations of Surgery, with illustrations on the cadaver, during the entire session.—Practical Chemistry, with Qualitative and Quantitative Analysis, the Examination of Normal and Abnormal Products, and Manipulation by the student, is taught by the Professor of Chemistry, assisted by the Demonstrator.—For the study of Practical Anatomy, a full supply of material is furnished free of charge. The dissecting ticket (fee 10 dollars) is good for one year from the date of issue.

The New Hospital of the Jefferson Medical College is designed for the accommodation of 125 patients. In connection with the hospital is the out-door or dispensary department, which furnishes much valuable material for clinical instruction. The amphitheatre, provided for Clinical Lectures, will seat more than six hundred students. Daily Clinical Lectures are given at the hospital, through the entire year, by members of the Faculty, and by the hospital staff.

A Summer Course of Supplementary Lectures is given, extending through April, May, and June. There is no additional charge for this Course to matriculates of the College, except a registration fee of five dollars; non-matriculates may pay thirty-five

dollars, which is, however, credited on the amount of fees paid for the ensuing Winter Course.

The Fees are: For a full Course, 140 dollars; Matriculation Fee (paid once only), 5 dollars; Graduation Fee, 30 dollars.

Students who have attended two full courses on Materia Medica, Institutes, Anatomy, or Chemistry, may be examined on any of these branches at the end of their second course.

#### PRELIMINARY SCIENTIFIC EDUCATION.

A highly important step has recently been taken by the trustees of the Johns Hopkins Hospital and Medical School in Baltimore, by the institution of a course of education to be followed as a preliminary to the study of medicine. We are indebted to the *New York Medical Record* for the following outline of the prospectus.

The proposed preliminary course is to be given late in September of this year. The object of this course, according to the prospectus, is to give the student a "liberal education, but one rather scientific than literary, and including a thorough knowledge of the structure and functions of the human body in health". The student will be prepared at the completion of this course to enter upon the study of the regular branches of medicine. The preliminary course will extend over three years, but students who pass a successful examination upon the studies prescribed for the first year will be allowed to enter at once upon the studies of the second year. Students matriculating in the above course, who are not already students of the University, will be obliged to pass an examination in elementary mathematics, algebra, and geometry, and to render translations from Cæsar and the *Æneid*. Excellency in spelling and conformity to the rules of English grammar are to be a *sine quâ non* of success in the examination. The course for the first year consists of French, German, and Drawing (free hand), with lectures and laboratory work in Experimental Physics, Elementary Mechanics, and Chemistry. The curriculum for the second year includes Chemistry, General Biology, an elementary course in Comparative Anatomy and Zoology with dissections, an elementary course in Physiology and Histology with laboratory work, Human Osteology and the Anatomy of the Ligaments and Joints, and Logic. The studies of the third year are to be Human Anatomy, an advanced course in Physiology and Histology, the elements of Embryology, and Psychology. An examination will be held at the end of each year upon the studies pursued during that year. Graduation in the above-mentioned branches will entitle the student to entrance upon the studies of the medical school without further examination. The preliminary course, however, is "designed to meet the requirements of students who wish to obtain a sound scientific basis for the professional studies, whatever medical school they may afterwards select". A formal diploma is to be granted to the graduate of the preliminary course.

The course in Physics, extending through the first year, will consist of weekly recitations, lectures, and laboratory exercises. A morning of each week is to be set apart for laboratory work. This work has two ends in view: 1. To give the student a clearer insight into the subjects studied, serving as a test of progress to both teacher and learner; and 2. To enable him to acquire a familiarity with the use of apparatus. The manner of conducting the exercise will be as follows. With the enunciation of a problem, each student will receive the apparatus neces-

sary for its solution, and will be required to make the series of observations which, with their discussion and reduction, he is to submit to his instructor. These results will then be criticised and returned. Those who are aiming at the profession of medicine will thus grow familiar with physical instruments and methods which are of prime importance in physiological researches—for example, thermometry, the laws governing the phenomena of electricity, of light, etc.

In the course on Chemistry, both organic and inorganic chemistry will be treated as thoroughly as possible: an examination upon the matter considered will be held after each two lectures. The principal work will be done in the laboratory. A knowledge of the general principles of chemistry must be had before entering the chemical laboratory. Regarding the nature of the chemical course in the laboratory, the prospectus says: "At first the student will have to make himself acquainted with the action of the various classes of substances upon each other, by actual observation at the laboratory desk; and his knowledge will be constantly tested by means of appropriate problems given him for solution. After completing this course, he will be enabled further to test his acquirements by taking up a course of qualitative and quantitative analysis. At intervals during the time he is engaged in this work he will be required to prepare some chemical compounds in a pure state, so that his ideas concerning chemical action may become enlarged, and his knowledge of the special properties of the different classes of compounds more definite and detailed."

The course in Biology is to consist of General Biology, preliminary to the study of anatomy and physiology. The student will be taught how to dissect, and the use of the microscope, "and will learn, in a general way, the forms assumed and the actions performed by living things." With this end in view, certain types, such as the amœba, vibrio, etc., will be minutely studied. Under this head also will come the consideration of homology and analogy. At the termination of the above course, the subject of Animal Morphology will be considered. The characters and affinities of each of the main groups of the animal kingdom will be systematically investigated. Then will come animal physiology and histology, with special reference to the human body, viz., the nutritive medium, the supporting tissues and organs, the contractile tissues, the nervous tissues, etc. In connection with this course students will be taught the preparation of specimens for microscopical examination. They will also be required to perform the simpler physiological experiments for themselves. Human Osteology, including the form, development, and general arrangement of the skeleton, will be taught in this year's course. The third year will be devoted to Human Anatomy, with lectures and demonstrations on the "anatomy of the muscular, vascular, nervous, and other systems of the body; and on the regional anatomy of certain important parts." Later in the year comes an advanced course in Physiology and Histology, consisting of—1. The physiology of the senses; 2. The physiology and histology of the nerve-centres; 3. A course of six lectures upon the chemistry of nutrition; 4. A course of lectures upon histogenesis (intended mainly as a foundation for the study of pathological anatomy). The year ends, finally, with the elements of Embryology.

The expense of tuition will amount to 80 dollars *per annum*, together with small charges for labora-



tory material. Free scholarships are provided for those young men from Virginia, Maryland, and South Carolina who need assistance. The term begins on the 24th September 1878, and ends in the following June. There are short vacations at Christmas and Easter.

## TEXT-BOOKS.

THE object of the subjoined notes on text-books is to inform the student in general terms of the work which he may consult with advantage. The list is not intended to be altogether exclusive—there may be good books not mentioned in it; nor is it our purpose to say always which book is the best in any subject. Some students learn best from one book; others from another. Again, some books are more adapted than others to the teaching of the school to which the pupil belongs. In addition to the ordinary text-books, reference will be made to some which, though not absolutely necessary to the student, may be studied both by him and by the licensed practitioner with advantage.

## ANATOMY AND PHYSIOLOGY.

Among the indispensable text-books must be mentioned in the first place Quain's *Elements of Anatomy* (Longmans and Co.), edited by Drs. Sharpey and Allen Thomson, and Mr. Schäfer. In its last edition the work has undergone thorough revision; and an interesting addition has been made in the form of a chapter on the Development of the Embryo, by Dr. Allen Thomson, than whom a more competent authority could scarcely be found. Gray's *Anatomy* (Longmans) has been edited by Mr. Holmes; and among the improvements in the last edition are copies of drawings by Dr. Klein. A new edition of Wilson's *Anatomist's Vade-Mecum*, by Dr. G. Buchanan and Mr. H. E. Clark of Glasgow, is published by Messrs. J. and A. Churchill. Braune's *Atlas of Topographical Anatomy*, translated and edited by Mr. Bellamy, is a valuable book for reference. The drawings are made from plane sections of foreign bodies. There is also Bock's *Atlas of Human Anatomy* (Renshaw), which has appeared during the present year; and Messrs. J. and A. Churchill are publishing, in parts, a valuable *Atlas of Human Anatomy* by Mr. Godlee. For use in the dissecting-room, Ellis's *Demonstrations of Anatomy* (Smith, Elder, and Co.) has long established its claim as a trustworthy guide. It contains reduced copies of plates in the author's *Illustrations of Dissections*—a work which from its price the student can scarcely be expected to purchase, but which he should not fail to consult for assistance. Another good book for dissectors is Mr. Christopher Heath's *Practical Anatomy*. Dr. Cleland of Glasgow has also brought out a concise and accurate *Directory for the Dissection of the Human Body* (Smith, Elder, and Co.) Mr. Thomas Cooke's *Tables of Anatomy and Physiology* (of which there is a new edition) contain much information in a condensed form, and give useful aid in the study of the larger works. For students of Osteology, Mr. Wagstaffe has prepared the *Student's Guide to Human Osteology* (J. and A. Churchill); and there is also Mr. Norton's *Osteology for Students* (Baillière, Tindal, and Cox). Mr. St. George Mivart's *Elementary Lessons in Anatomy* is a book in which the interest of the subject is increased by a demon-

stration of the chief relations of the structure of man to other animals. To students who feel an interest in the study of Zoology and Comparative Anatomy, we would recommend, as works that will give much information without being too large or costly, Mr. Flower's *Osteology of the Mammalia* (Macmillan and Co.), and Dr. H. A. Nicholson's *Manual of Zoology and Advanced Text-Book of Zoology*; as well as Huxley's *Manual of the Anatomy of Vertebrated and Invertebrated Animals* (J. and A. Churchill). Dr. Rolleston's *Forms of Animal Life* is a good book for laying a sound foundation of Comparative Anatomy. For the general study of Embryology (in addition to the chapter by Dr. Thomson in Quain's *Anatomy*, already referred to) the *Elements of Embryology*, by Dr. M. Foster and Mr. Balfour, is an excellent book.

For instruction in Histology, the chapter on General Anatomy in Quain's *Anatomy* is an excellent guide. Other works of much value are Mr. Schäfer's *Course of Practical Histology* (Smith, Elder, and Co.), and Prof. Rutherford's *Outlines of Practical Histology for Students and Others* (Churchill). Messrs. Smith, Elder, and Co. are about to publish an *Atlas of Histology*, by Dr. E. Klein and Mr. Noble Smith. It may fairly be anticipated that this will be a work of considerable value. Professor Stricker's collection of essays on *Human and Comparative Histology*, translated for and published by the New Sydenham Society, is a valuable work of reference; as is also Heinrich Frey's *Histology and Histo-Chemistry of Man*, translated by Mr. Barker (J. and A. Churchill).

In Physiology, the student will find any of the following to be trustworthy guides: Dr. M. Foster's *Text-Book of Physiology* (Macmillan and Co.); Dr. McKendrick's *Outlines of Physiology in Relation to Man* (Maclehose, Glasgow); Dr. L. Hermann's *Elements of Physiology*, translated by Professor Gamgee (Smith, Elder, & Co.); Huxley's *Elementary Lessons in Physiology*, and Flint's *Text-book of Human Physiology* (H. K. Lewis) are also useful books. The well known Kirkes's *Handbook of Physiology* has been re-edited, with improvements, by Mr. Morrant Baker (J. and A. Churchill); and Dr. Carpenter's *Principles of Human Physiology*, by Mr. Power. The increased study in recent years of Practical Physiology has led to the publication of several guides to this department of study. An *Elementary Course of Practical Physiology* by Dr. M. Foster and Mr. Langley (Macmillan and Co.) is a book that can be recommended to beginners; while the more elaborate *Handbook for the Physiological Laboratory*, by Drs. Sanderson, Klein, Foster, and Brunton (Churchill), is more fitted for those who intend to follow the study to a greater extent than medical students usually do.

As guides in the use of the Microscope, there are Dr. Beale's *Microscope in Medicine*, Dr. Carpenter on the *Microscope* (J. and A. Churchill), Wythe's *Microscopist's Manual* (Churchill), and Martin's *Manual of Microscopic Mounting* (Churchill).

For instruction in Physiological Chemistry, there are Dr. Ralfe's *Outlines of Physiological Chemistry* (H. K. Lewis), and Mr. S. W. Moore's *Notes of Demonstrations in Physiological Chemistry* (Smith, Elder, and Co.)

## MEDICINE.

For the student who is commencing his clinical studies, there are several very good guide-books. Among them are Dr. A. W. Barclay's *Guide to Medi-*

*cal Diagnosis* (third edition, J. and A. Churchill), Dr. S. Fenwick's *Student's Guide to Medical Diagnosis* (J. and A. Churchill); and Dr. O. Sturges' *Introduction to the Study of Clinical Medicine* (Smith, Elder, and Co.) More advanced students and practitioners may consult with advantage Dr. Da Costa's *Medical Diagnosis* (third edition, Smith, Elder, and Co.) As a guide in physical diagnosis, Dr. Gee's *Auscultation and Percussion* (Smith, Elder, and Co.), may be safely trusted. Another useful book for the same purpose is Flint's *Manual of Percussion and Auscultation* (J. and A. Churchill).

Of text-books in General Medicine, it is only necessary to mention Sir Thomas Watson's *Lectures on the Principles and Practice of Physic* (Longmans and Co.), and Dr. Aitken's *Science and Practice of Medicine* (C. Griffin and Co.) as works whose reputation has long been established. Among other books which may be recommended for the use of the student, are Dr. F. T. Roberts's *Handbook of the Theory and Practice of Medicine* (third edition, H. K. Lewis), Dr. J. S. Bristowe's *Treatise on the Theory and Practice of Medicine* (Smith, Elder, and Co.), Dr. Aitken's *Outlines of the Science and Practice of Medicine* (C. Griffin and Co.), Dr. Barlow's *Manual of the Practice of Medicine* (J. and A. Churchill), Dr. H. Hartshorne's *Essentials of the Principles and Practice of Medicine* (Smith, Elder, and Co.), and Dr. Charteris's *Student's Guide to the Practice of Medicine* (J. and A. Churchill). The advanced student and the practitioner will do well to consult Dr. Russell Reynolds's *System of Medicine* (four volumes, Macmillan and Co.), Trousseau's *Lectures on Clinical Medicine* (New Sydenham Society), and Ziemssen's *Cyclopædia of the Practice of Medicine* (Sampson Low and Co.)

### SURGERY.

Mr. Erichsen's *Science and Art of Surgery* (two volumes, Longmans and Co.), Mr. Holmes's *Surgery—its Principles and Practice* (Smith, Elder, and Co.), and Mr. Bryant's *Practice of Surgery*, are all very complete works, one of which should be in the possession of the student. For those who prefer smaller and more condensed works, there is the well known Druitt's *Surgeon's Vade Mecum*, an eleventh edition (Churchill). Among the works more specially devoted to Practical Surgery, the late Sir William Fergusson's excellent *System of Practical Surgery* (fifth edition, J. and A. Churchill), holds the foremost place. Mr. Spence's *Lectures on Surgery* (A. and C. Black) is valuable as a record of practical instruction, illustrated by cases. Among other books which may be consulted with advantage, are Mr. Holmes's *System of Surgery* (Longmans and Co.), Dr. S. D. Gross's *System of Surgery* (Smith, Elder, and Co.), and Mr. Gant's *Science and Practice of Surgery* (J. and A. Churchill).

For the guidance of the student who is being instructed in practical and operative surgery, there are several good books. Mr. Christopher Heath's *Manual of Minor Surgery and Bandaging* (fifth edition, Churchill) has for several years enjoyed a high reputation as a trustworthy guide. The *Manual of Operative Surgery on the Dead Body*, by Mr. Thomas Smith and Mr. Walsham (Longmans and Co.); Mr. Berkeley Hill's *Essentials of Bandaging* (Smith, Elder, and Co.); Mr. Bellamy's *Student's Guide to Surgical Anatomy* (J. and A. Churchill); Mr. Maunder's *Operative Surgery* (second edition, J. and A. Churchill); Mr. Joseph Bell's *Manual of*

*the Operations of Surgery* (MacLachlan and Stewart); and Stimson's *Operative Surgery* (Lewis), are also works which can be recommended. Other larger works, most valuable for reference—and to be procured by the student if possible—are Mr. Jonathan Hutchinson's *Illustrations of Clinical Surgery*, consisting of plates, woodcuts, etc., illustrating surgical diseases, symptoms, accidents, operations, etc. (published in fasciculi by J. and A. Churchill); Mr. C. Heath's *Course of Operative Surgery*, with coloured plates (J. and A. Churchill); and Mr. Norton's edition of Bernard and Huette's *Text-Book of Operative Surgery* (Baillière, Tindall, and Cox). For the student of Military Surgery, Surgeon-General Longmore's work on *Gunshot Injuries* (Longmans and Co.), and Surgeon-Major Porter's *Surgeon's Pocket-Book*, are essential.

### MIDWIFERY; AND DISEASES OF WOMEN AND CHILDREN.

The two text-books of Obstetric Medicine which hold the first place in the present day are, Dr. W. S. Playfair's *Treatise on the Science and Practice of Midwifery* (Smith, Elder, and Co.); and Dr. Leishman's *System of Midwifery* (second edition, J. Maclehose, Glasgow). Every student should have one or the other of these. For those who prefer smaller books, Dr. D. Lloyd Roberts's *Student's Guide to the Practice of Midwifery* (J. and A. Churchill) will be useful; there are also Dr. Alfred Meadows's *Manual of Midwifery* (Renshaw) and Dr. C. H. Carter's translation of Karl Schröder's *Manual of Midwifery* (J. and A. Churchill). Dr. J. G. Swayne's *Obstetric Aphorisms* (fifth edition, J. and A. Churchill), Dr. Clay's *Complete Handbook of Obstetric Surgery* (J. and A. Churchill), and Dr. Heywood Smith's *Practical Gynecology* (J. and A. Churchill) are very useful as convenient refreshers of the memory. Dr. Barnes's *Lectures on Obstetric Operations* (third edition, J. and A. Churchill) is a book which should be in the possession of every advanced student and general practitioner; as should also the *Clinical History of the Medical and Surgical Diseases of Women*, by the same author (Churchill). Dr. Graily Hewitt's *Diagnosis and Treatment of Diseases of Women* (Longmans and Co.); the late Dr. F. Churchill's work on the *Diseases of Women* (Fannin and Co.); and Dr. Gaillard Thomas's *Practical Treatise on the Diseases of Women*, are all valuable books.

Among text-books on Diseases of Children, must be mentioned Dr. West's well known *Lectures on the Diseases of Infancy and Childhood* (Longmans and Co.); Dr. Fleetwood Churchill's treatise on *The Diseases of Children* (Fannin and Co.); M. Guersant's *Surgical Diseases of Infants and Children*, translated by Dr. Dunglison (Smith, Elder, and Co.); Pepper's *Practical Treatise on Diseases of Children* (H. K. Lewis); and Dr. Eustace Smith's *Clinical Studies of Disease in Children* (J. and A. Churchill).

### PATHOLOGY.

An English translation of Virchow's treatise on *Post Mortem Examinations: the Art of Making them*, has been published by J. and A. Churchill; and the reputation of the Berlin professor as an authority in the matter is a sufficient warrant of its value. Messrs. Smith, Elder, and Co. have published a *Manual of Necroscopy*, by Dr. A. H. Newth, which is intended as a guide to the performance of



*post mortem* examinations. As a manual of pathology, Dr. T. H. Green's *Introduction to Pathology and Morbid Anatomy* (Renshaw) is well calculated to give a student sound ideas. The *Lectures on Pathological Anatomy* of Drs. Wilks and Moxon, and Dr. J. F. Payne's improved edition of Jones and Sieveking's *Manual of Pathological Anatomy*, are also good books. We would also strongly recommend students to consult, and to possess, if possible, Rindfleisch's *Manual of Pathological Histology*, and Billroth's *Surgical Pathology and Therapeutics*, both edited by the New Sydenham Society.

### SPECIAL SUBJECTS.

There are several good text-books of the special departments which are taught in the schools. For students of Ophthalmic Surgery, Mr. Soelberg Wells's *Treatise on Diseases of the Eye* (third edition, J. and A. Churchill); Mr. R. B. Carter's *Treatise on Diseases of the Eye* (Macmillan and Co.); Mr. Macnamara's *Manual of Diseases of the Eye* (third edition, J. and A. Churchill); Mr. George Lawson's *Diseases and Injuries of the Eye* (Renshaw); Mr. B. T. Lowne's *Handbook of Ophthalmic Surgery* (Smith, Elder and Co.), are books that will be useful. Messrs. Churchill have also published a little book by Mr. Charles Higgins, entitled *Hints on Ophthalmic Out-patient Practice*. Mr. C. A. Browne, of the Liverpool Eye and Ear Infirmary, has brought out a little book for instructing students *How to Use the Ophthalmoscope* (Trübner and Co.).—In Aural Surgery, Mr. Dalby's book on *Diseases and Injuries of the Ear* is very good; while Dr. Burnett's work on *The Ear: its Anatomy, Physiology and Diseases*, is more elaborate. There is also an useful work on the subject by Dr. Macnaughton Jones.—For the use of students in Dermatology, Dr. Tilbury Fox has provided a treatise on *Skin-Diseases, their Description, Pathology, Diagnosis, and Treatment* (third edition, H. Renshaw); and also a little epitome of the same subject, which, while not intended to supersede larger works, will be found very useful to the student and practitioner. Mr. Erasmus Wilson's *Treatise on Diseases of the Skin*, and his *Lectures on Dermatology* (J. and A. Churchill) are well known and valuable works. Dr. Pullar has translated the *Text-Book of Skin-Diseases*, by Dr. Neumann of Vienna (Hardwicke and Bogue). Dr. R. Liveing's *Notes on the Treatment of Skin-Diseases* (Chapman and Co.) is also an useful epitome. Good representations are most important in this department; and Dr. Tilbury Fox has accordingly supplied an excellent *Atlas of Skin-Diseases* (Renshaw); while a work with a similar title by Dr. Duhring of Philadelphia (Lippincott and Co.) is also very good.—For students of Dental Surgery, the following books are published by Messrs. J. and A. Churchill: Tomes's *Manual of Dental Surgery*; Tomes's *Manual of Dental Anatomy*; Sewill's *Student's Guide to Dental Anatomy and Surgery*; Smith's *Handbook of Dental Anatomy and Surgery*; and Edes's *Manual of Dental Mechanics*.

### MATERIA MEDICA AND THERAPEUTICS.

Text-books in *Materia Medica* abound. A well-known and useful book as a manual of *materia medica* is Dr. Garrod's *Essentials of Materia Medica and Therapeutics*, edited by Dr. Buchanan Baxter (Longmans and Co.). It requires, however, to be

supplemented by a treatise on therapeutics; for which purpose Dr. Ringer's *Handbook of Therapeutics* (H. K. Lewis), Dr. Waring's *Manual of Practical Therapeutics* (J. and A. Churchill), and Dr. Farquharson's *Guide to Therapeutics* (Smith, Elder, and Co.), and Dr. Sparks's edition of Binz's *Elements of Therapeutics* (J. and A. Churchill), are to be recommended. Dr. Milner Fothergill's *Practitioner's Handbook of Treatment* (Macmillan and Co.) will be especially welcome to those who are interested in the endeavour to show the agreement between science and practice. Dr. H. C. Wood's *Treatise on Therapeutics* (Smith, Elder and Co.) pays special attention to the therapeutic action of drugs. Other trustworthy books are Dr. W. G. Smith's *Commentary on the British Pharmacopæia* (Smith, Elder and Co.), Royle and Harley's *Manual of Materia Medica and Therapeutics* (sixth edition, J. and A. Churchill), Neligan's *Medicines*, edited by Mr. Macnamara (Fannin and Co.), Dr. R. Bartholow's *Practical Treatise on Materia Medica and Therapeutics* (H. K. Lewis), Thorowgood's *Student's Guide to Materia Medica* (J. and A. Churchill), and Dr. Phillips's *Materia Medica and Therapeutics* (J. and A. Churchill). Dr. Lauder Brunton's *Tables of Materia Medica* (Smith, Elder and Co.) are a most comprehensive and valuable syllabus, and will be very useful to the student. So also are Dr. I. Owen's *Tables of Materia Medica* (J. and A. Churchill).

As text-books in the application of Electricity to Medicine, besides Dr. Althaus's *Treatise on Medical Electricity* (Longmans and Co.) the following are likely to prove useful to students, viz., a *Text-Book of Electricity in Medicine and Surgery*, by Dr. G. V. Poore (Smith, Elder and Co.); a *Handbook of Medical and Surgical Electricity*, by Dr. H. Tibbits (J. and A. Churchill), and M. Onimus's *Practical Introduction to Medical Electricity*, translated by Dr. de Watteville (H. K. Lewis).

### FORENSIC MEDICINE, ETC.

As elementary works of convenient size, and containing valuable instruction, Dr. A. S. Taylor's *Manual of Medical Jurisprudence* (J. and A. Churchill), and Guy and Ferrier's *Principles of Forensic Medicine* (Renshaw), are to be recommended. The more advanced student and the practitioner should consult Dr. Taylor's *Principles and Practice of Medical Jurisprudence* (J. and A. Churchill); the *Handybook of Forensic Medicine and Toxicology* by the late Dr. Bathurst Woodman and Dr. Tidy (J. and A. Churchill); and the translation of Casper's *Forensic Medicine*, published by the New Sydenham Society. The last-named book will give an idea of the manner in which medico-legal investigations are carried out on the continent.

Under the head of Hygiene, the principal books are Dr. Parkes's *Practical Hygiene* (J. and A. Churchill); Wilson's *Handbook of Hygiene and Sanitary Science*; Dr. de Chaumont's *Lectures on State Medicine* (Smith, Elder and Co.); and Michael, Corfield, and Wanklyn's *Manual of Public Health*.

### REVIEWS.

*Atlas of Skin-Diseases.* By LOUIS A. DUHRING, No. 1, 1876; No. 2, 1877; No. 3, 1878. Two plates in each. Philadelphia: Lippincott and Co.

If the greatness of a work be measured by the

slowness of its growth, it will be seen that this bids fair to be a "big thing". Dr. Duhring is already well known for his *Practical Treatise* (1877); and if he says that such an atlas "is an urgent need in American medical literature", we must bow to his opinion. It is, as he remarks, generally conceded that the aspect of certain skin-diseases differs in different countries, and his object is to illustrate the dermatology of America.

The cases are selected from the Skin Department of the Pennsylvania University Hospital, and from the Skin Dispensary, and are drawn by Faber and lithographed in colours by Moras; the edition is limited, and the drawings are effaced after the first printing. No special order is observed, but each portrait is accompanied by a page or so of descriptive letterpress, as rendered familiar to most of us by the works of Erasmus Wilson, Fox, and others. Classification will be furnished when the work is bound.

The size of the plates is royal quarto—intermediate between that adopted by Hebra and that by Tilbury Fox. Their general character is certainly good. There are none that it is possible to mistake. Specially good are those of erythematous lupus, tinea versicolor, purpura; less good is the papular and pustular syphilide (the last); and some, such as those of acne, psoriasis, ichthyosis, and sycosis—the last-named especially—we should criticise as rather artificial. Of course "to conceal the art" is a difficulty, and we would not wish to imply much fault. There is much more to praise than to blame.

So far, we see nothing special to the country in the delineations; and Dr. Duhring remarks himself (in the preface to his *Practical Treatise*) that the cases he meets with resemble more those we have seen in Great Britain than those of France or Germany. The letterpress is good; the cases are well put and instructive; the treatment is judicious.

A severe case of *eczema* (called erythematous) not discharging, affecting mainly the face and connected with dyspepsia, receives a ferro-magnesian mixture and a carbolic acid lotion (3iss to pint of water and ounce of glycerine). Most of us would have used lead or zinc lotion at first, and less glycerine; but the man recovers in three weeks. For *psoriasis*, a tar ointment, *sapo viridis*, arsenic and cod-liver oil, are ordered. The eruption in this case came first during pregnancy, and next after childbirth, but Dr. Duhring does not mention its frequent connection with lactation, and its spontaneous subsidence afterwards. The chrysophanic acid method had not reached America when this plate appeared.

We get but little satisfaction as to the treatment of *erythematous lupus*, a malady which the author finds more common than *lupus vulgaris*. He means by it apparently what the Germans mean, a form of lupus beginning in, or chiefly affecting the *sebaceous* glands; but he might have told us that in England we commonly mean by the term simply superficial lupus (non-exedens) and do not lay stress on sebaceous complications. Tilbury Fox gives a good account of the difference, and prefers to name the German form—if one may call it so—*lupus acneiformis*. Dr. Duhring uses a tincture of soap and tar, sometimes caustics. We must agree that it is rebellious, but iodoform deserves trial.

A case of *acne rosacea*, apparently one independent of either gastric or uterine trouble, receives nightly hot fomentation and an ointment of hypochloride of sulphur (one or two drachms to the ounce); enlarged capillaries are incised; later a

potash soap and a lotion of sulphur, ether, and alcohol are used; and recovery takes place in three months. Two brothers are affected with *ichthyosis*; no other members of the family. No etiology is suggested. The ordinary emollient applications only are recommended; but in our experience doses of iodide of potassium are not to be despised; and great care in clothing with "fleece hosiery" will assist much.

The account of tinea versicolor would be much more complete with an engraving of the parasite. The diagnosis is said "to offer no difficulty"; it ought not to do so, perhaps, but it is not unfrequently made as "syphilis".

In sycosis (non-parasitic) we can scarcely agree that a "tubercular, lumpy, uneven surface is wanting", and that this helps the diagnosis from tinea sycosis; we have often seen the former condition from purulent collections, but it certainly is a point that the non-parasitic invades the upper lip more frequently than does the parasitic.

A case of papular syphilidemia gets one grain of "blue mass" thrice daily, and another case is ordered a bath of corrosive sublimate (5j to 30 gallons). A child with purpura simplex gets ergot.

We have mentioned these as practical points of interest, rather than as simply reviewing them. We would say, in conclusion, that the work is likely to add to the reputation of its author and of American dermatology.

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## NEW INVENTIONS.

### PEPTOCOLOS, OR COMBINED PEPSINE WINE.

The addition of pancreatic, diastase, lactic, and hydrochloric acids, to the vinous solutions of pepsine, tends obviously to assimilate it to a highly organised digestive fluid, and will not fail to prove attractive to many therapeutists. The clinical report which we have received of the result of the use of the specimen of peptocolos administered in two cases of dyspepsia and through defective assimilation, is very favourable. The preparation before us is manufactured by Messrs. Richardson and Co., Friar Lane, Leicester.

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### ALLEN AND SON'S PORTABLE BATHS.

Messrs. James Allen and Son's portable hot-air and vapour bath, a notice of which appeared in our pages some time ago, has received several improvements, and possesses in a high degree the merits of portability, simplicity, and cheapness, with durability. It will give a bath of hot-air only, or hot-air and vapour combined, and can be used for a medicated or mercurial bath. It can be used under a chair, or applied to the bed, or for any local application required.

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### ALLEN AND SON'S BRONCHITIC KETTLES.

These articles are made in two varieties to suit the necessities of various cases, or the convenience of patients. One is made for use over the fire; the other is supplied with a stand and spirit-lamp, and can be placed on the table by the bedside, or in any position desired. They are plain and substantial in appearance, strongly made, and sold at a price placing them within the reach of all.



### ALLEN AND SON'S INFANT'S AND INVALID'S FOOD-WARMER.

This is a very elegant and useful article. The stand is supplied with a spirit-lamp, but this is removable, and any night-light can be used. Each article is supplied with an earthenware pannikin for infant's food, a saucepan with wooden handle for Liebig's food, and a kettle for making a cup of tea, coffee, or cocoa, when a fire is not at hand. The price of the set complete is only 10s.

### RAWLINGS' "EXCEL FILTER".

The "Excel Filter", filled with twice burned animal charcoal, is alleged to combine the following advantages: the extraction or oxidation of organic, decomposing, or putrescent matter, as being the chief and first essential in a filter; the extraction of suspended matter (dirt) or colour from water, with freedom from easily choking up; the adoption of upward filtration as the best mechanical arrangement, which allows a far greater speed of filtration, with assured purification of the water. The flow of water through the filter can be regulated to the quality of the water used. The filtering material is easily cleaned or renewed by any one. The simplicity of construction ensures immunity from constant attention being required. The water being filtered as drawn in most cases, the flatness of taste in filtered water is entirely avoided. The system is adapted for purifying the largest quantities of water with facility.

### THE CABINET TURKISH BATH.

The cabinet Turkish bath, patented and manufactured by Messrs. Ellis and Co. of 42, Hart Street, Bloomsbury, provides a very convenient and perfect substitute for the ordinary Turkish bath where the latter is not readily available. It consists of a neat wooden cabinet mounted upon castors so as to be easily moved from place to place, and is provided with a foot-warmer, which is adjustable, as also is the seat, so that the bath may be used by persons of different heights. It is particularly suitable for use in hospitals and other public institutions, since it is easily moved about and easily kept clean, and may be used as a hot-air, vapour, sulphur, or mercurial bath, as may be desired.

### THE INTERMEDICAL NOTE.

The "Intermedical Note" is a stereotyped note, signed by a medical man, and sent to another practitioner in the same town, requesting him to attend a patient for him in his absence, and which brings the former under an obligation to return an equivalent. The nature of the "case", and "number of visits", with "initials" of substitute or *locum tenens*, are marked on it, and particulars are supplied, when convenient, to the practitioner whose the case was originally. The introduction of the "Note" is designed to facilitate chiefly the getting of a sufficient holiday annually by every medical man, at no sacrifice to his interests, on the principle of mutual assistance, and without the necessity of making any special arrangement beforehand. A day, also, may be had at any time, without the anxiety inseparable from leaving home without having properly arranged about a substitute.

### MISCELLANY.

DR. FASBENDER, private teacher of Obstetrics in the University of Berlin, has been appointed an extraordinary professor in the same department.

DR. WEGENER, *privat-docent* in the University of Berlin and first assistant in Langenbeck's Clinic, has been elected, from among thirty-five candidates, directing physician of the new hospital at Stettin.

WE regret to hear of the death, in his fifty-eighth year, of Dr. Julius Braun, the well known physician at Oeynhausen, and author of a valuable treatise on the *Curative Effects of Baths and Waters*, which was translated into English a few years ago by Dr. Hermann Weber.

DR. QUINCKE, Professor of Medicine in the University of Bern, has succeeded the late Dr. Bartels as Professor of Pathology and Therapeutics and Director of the Medical Clinic in the University of Kiel.

DR. FOVILLE, the celebrated psychologist, died recently at Toulouse, in the seventy-eighth year of his age.

ACCORDING to the *Popolo Romano*, two universities for ladies are about to be established in Italy; one in Florence and the other in Rome.

ACCIDENT IN THE TYROL.—During a recent mountain excursion near Bormio, two young Berlin physicians—Dr. Sachs, assistant in Professor Dubois-Reymond's physical laboratory, and Dr. Salomon, assistant in Professor Frerichs' wards—fell down a precipice. The former was killed; the latter escaped with a double fracture of the leg.

DR. EPHRAIM McDOWELL.—A granite monument, thirty feet in height, with suitable inscriptions, is about to be erected in Danville, Kentucky, to the memory of Dr. Ephraim McDowell, the "father of ovariectomy".

BOTANICAL PRIZES FOR LADIES.—The Society of Apothecaries in London have this year instituted a series of prizes for proficiency in Botany, open to young women not exceeding twenty years of age: and the first examination was held in June last. The subjects were: 1. Structural Botany; 2. Vegetable Physiology; 3. Description of Living Plants; 4. Systematic Botany; and the questions had reference to general and not medical botany. The text-books recommended were Sir Joseph Hooker's *Science Primer on Botany*, and Professor Oliver's *Lessons in Elementary Botany*. The examination consisted of two parts. For the first, seventy-seven candidates presented themselves, and were examined, by written papers, in the structure and physiology of phænogamous plants. Twenty obtained certificates of merit; and of these, nineteen appeared at the second examination and competed for the prizes, which consisted of the Society's gold and silver medals, and two volumes of Illustrations of the Natural Orders, presented by Miss Twining of Twickenham. The subjects of examination were the cryptogams, and microscopic demonstrations. The three successful candidates were respectively nineteen, seventeen, and fifteen years of age. The examination was conducted by the Rev. M. J. Berkeley; and the papers written were reported to be of great merit.

AUTOMATIC MOVEMENTS.—A contributor to the LONDON MEDICAL RECORD informs us that in the Island of Java there exist among the Malay race a number of individuals whose movements, like those of the Jumping Frenchmen, recorded in the LONDON MEDICAL RECORD for August (p. 368), are beyond their control. Every action performed by their neighbour they must imitate: let any attitude be assumed, immediately they will throw themselves into a similar posture. If they are carrying a child and see any one pretend to drop any article, down falls the child out of their arms. The same would occur if carrying a bag of fragile articles. Advantage is often taken of this irresistible propensity to irritate, by practical jokers suddenly rushing and embracing some staid and

sober friend, who at once finds himself, or herself, in a double embrace. The writer, on one occasion, called, with the newly-arrived Consular Chaplain of Batavia, upon one of the English residents, in whose service was one of these "Lata", as they are called in the Malay language. She answered the visitors' bell, and immediately performed a vigorous dance, with grotesque arm-movements, in response to those executed by the writer for the edification of his clerical friend, who looked on with feelings of unmixed surprise, and wished to know whether that was the usual custom of the country when making calls. Upon another occasion, practical advantage was taken of this singular condition of the nervous system in the female just alluded to. The doctor was asked to extract her tooth, a procedure to which she decidedly objected. Coaxing being of no avail, the doctor took a chair; the patient did the same; he moved it nearer her side; she at once moved hers, and at last they were seated close together; the doctor yawned deeply and shut his eyes, and so did the young woman; the former jumped up instantly and clapped on the forceps, and extracted the tooth before the patient had time to open her eyes, although afterwards she opened them very widely.

**PHYSIOLOGICAL ACOUSTICS.**—At the recent meeting of the British Medical Association in Bath, Dr. McKendrick, the President of the Section of Physiology, gave his opening address at the Guildhall on the subject of Physiological Acoustics. He said he thought it would not be uninteresting to bring under notice some points connected with physiological acoustics, a department of science which, in most recent times, had attracted a good deal of attention throughout the world. The brilliant discovery of the telephone, the phonograph, and the microphone, had brought the whole topic prominently before the mind; and, although the subject might be regarded as far apart from the ordinary work of the profession, it had been, and would, he hoped, for many years continue to be the glory of the medical profession that, in addition to being engaged in actual practice, in alleviating the sufferings of mankind, the members of it had been interested in the general progress of science and the advancement of knowledge in all departments. Having described the production of sounds, he said when they thought of sounds happening about them, they naturally divided them into two classes—noises and musical sounds. Noises might be produced by the combination of musical tones forming a discord, and a pure musical tone was produced by a series of equal and regular impulses upon the ear, occurring in a certain interval of time. But if they varied in regard to intensity and successive impulses, the sensational effect was not that of a musical tone, but that of a noise. He illustrated this by means of the apparatus called the syren. The ear had the power of discriminating the tones of a certain pitch, but the pitch depended upon the number of impulses in a given time, and the greater the number of impulses in a second the higher the given tone. Contrasting the eye with the ear, he observed that the vibrations producing the sensation of light on the eye were more rapid than those producing the sensation of sound on the ear. He observed that a musical tone had, firstly, a certain pitch; secondly, it had the character of intensity; and lastly, that of quality or timbre. He illustrated the last by means of a number of differently pitched tuning forks, and said the quality depended upon the combination of a number of tones existing in a compound sound. He stated that tones were divided into simple and compound. The simple tone was like the sound of an organ pipe, and the compound like that of the human voice, or of a musical instrument. He observed that there was a certain analogy between the effects of sound and light, and showed how they could analyse compound tones into simple tones by taking advantage of the principle of sympathetic vibration, which lay at the root of the physiology of hearing, for the ear was an analytical instrument. In conclusion, Dr. McKendrick explained the construction of the phonograph and microphone. In regard to the latter instrument, he said he had been trying a number of experiments for the purpose of making it useful for auscultation, but the results he had obtained had not been very satisfactory. The address was profusely

illustrated with demonstrations, and, at the close, a hearty vote of thanks was accorded to Dr. McKendrick. At the request of a large number of members, the demonstration was repeated on the following day.

**UNIVERSITY OF LONDON.**—The following candidates passed the recent preliminary scientific M.B. examination:—

*First Division.*—Back, Herbert Hatfield, St. Bartholomew's Hospital; Bailey, Charles Frederick, St. Bartholomew's Hospital; Beevor, Hugh Reeve, King's College; Berry, James, St. Bartholomew's Hospital; Bourne, Alfred Gibbs, University College; Brogden, Richard William, Guy's Hospital; Brown, James Grierson, Liverpool School of Medicine; Champ, John Howard, Guy's Hospital; Collier, Joseph, University and Owens Colleges; Cooper, George Frederick, St. Thomas's Hospital; Croft, Edward Octavius, University College; Dashwood, Edmund Samuel, Guy's Hospital; Dillon, John Patrick Crouly, St. Thomas's Hospital; Dingley, Edward Alfred, University College; Ellison, John Clement, St. Bartholomew's Hospital; Evans, Charles Silvester, St. Thomas's Hospital; Fletcher, Joseph James, B.A. Syd., University College and Royal School of Mines; Forrest, James Rocheid, University College; Frankland, Percy Faraday, Royal School of Mines and University College; Halliburton, William Dobinson, University College; Hart, William Hamilton, Guy's Hospital; Hichens, James Harvey, Epsom College; Hoffmeister, George Bernard, Caius College and St. Bartholomew's Hospital; Knight, Frederick, University College; Lever, Frederick, Guy's Hospital; Maye, John, London Hospital; Moore, Herbert Cecil, University of Edinburgh; Onions, Edwin James, B.A., private study; Overend, Walker, Royal School of Mines and St. Bartholomew's Hospital; Penrose, Francis George, University College; Pike, Charles James, University College; Porter, Guy David, King's College; Price, John Alfred Parry, Guy's Hospital; Ridsdale, James Grundy, Queen's College, Birmingham; Robbs, Charles Edward, Epsom College; Roberts, Edward, Guy's Hospital and Epsom College; Rogers, James Macdonald, Middlesex Hospital; Samways, Daniel West, St. Bartholomew's Hospital; Scott, Bernard Charles, Middlesex Hospital; Starling, William Egerton, Guy's Hospital; Stedman, Charles Randolph, Guy's Hospital; Sutton, Alfred Martin, Guy's Hospital; Tunzelmann, Edward Waldemar von, University College; Weldon, Walter Frank Raphael, St. John's College, Cambridge; Wells, Alfred Ernest, St. Thomas's Hospital; Wilkinson, W. Camac, B.A. Syd., private study and University College; Woollett, Charles Jerome, Charing Cross Hospital; Worthington, Sidney, University College. *Second Division.*—Batten, Rayner Derry, St. Bartholomew's Hospital; Beard, John, Owens College; Bertram, Benjamin, St. Bartholomew's Hospital; Beverley, John Metcalfe, Owens College; Brooks, Walter Tyrrell, King's College; Bruce, Robert Marston, St. Thomas's Hospital; Campbell, Harry, St. Bartholomew's Hospital; Carnelley, Matthew, Owens College and private study; Carter, Thomas Edward, St. Bartholomew's Hospital; Clegg, William Wheelwright, Yorkshire College; Crowther, Jonathan, Owens College; Cuff, Robert, Guy's Hospital; Davies, William Thomas Frederick, Guy's Hospital; De Cordova, Rudolph Ferdinand F., University College; Dembski, Frederick Emile, private study; Downes, Howard, University College; Dreaper, John Broomfield, St. Thomas's Hospital; Evans, Willmott Henderson, University College; Gordon, Edward, Owens College; Hall, Ben., St. Bartholomew's Hospital; Herbert, Charles Alfred, Westminster Hospital; Hewer, Joseph Langton, St. Bartholomew's Hospital; Hoar, Charles Desamblier, University College; Hoyland, Stanley Stenton, St. Bartholomew's Hospital; Irvin, Frederic David, University College; Jackson, Philip John, Guy's Hospital; Kealy, John William Gregory, King's College; King, Arthur, University of Edinburgh; Langridge, Frank Washington, University College, Bristol, and private tuition; Little, Ernest Muirhead, St. George's Hospital; Marsh, Nicholas Percy, St. Bartholomew's Hospital; Mason, Arthur Henry, University College;



Maughan, James, Liverpool Royal Infirmary School of Medicine; Mayo, Frank Herbert, Yorkshire College; Parkinson, Charles Joseph, Owens College; Parry-Jones, Maurice, University College; Smith, Thomas Hanson, Leeds School of Medicine; Walker, Joseph Eagland, University College; Walton, Geo. Augustus Turner, St. Bartholomew's Hospital; Whelpton, John, Leeds Medical School and Yorkshire College; Whish, Martin Samuel, University College; Whitaker, Joseph James, B.A., University College; Williams, Arthur John, private study; Wilson, Arthur Henry, Liverpool Royal Infirmary School of Medicine.—*Examination for Honours (First B.Sc. and Preliminary M.B. Examinations conjointly). Chemistry.*—*Second Class*—Teed, Frank L., First B.Sc., University College and private study; Williams, Thomas Walter, First B.Sc., University College and Royal College of Chemistry. *Third Class*.—Onions, Edwin James, Prel. Sci., private study; Hoffmeister, George B., Prel. Sci., Caius College and St. Bartholomew's Hospital; Rennie, Edward H., First B.Sc., University College and Royal School of Mines, equal; Hart, Samuel L., First B.Sc., St. John's College, Cambridge. *Experimental Physics. First Class*.—Waghorn, J. W. W., First B.Sc. (disqualified by age for Arnott Exhibition and Medal), private study; Hart, S. Lavington, First B.Sc. (Arnott Medal), St. John's College, Cambridge. *Second Class*.—Burns, Gavin James, First B.Sc., Birkbeck Institution and private study; Hill, Samuel C., B.A., First B.Sc., University College; Samways, Daniel West, Prel. Sci., St. Bartholomew's Hospital; Barfield, S. G. H., First B.Sc., private study; Laloe, Aug. F., B.A., First B.Sc., private study; Hichens, James H., Prel. Sci., Epsom College; Onions, Edwin J., Prel. Sci., private study. *Third Class*.—Hall, Ben., Prel. Sci., St. Bartholomew's Hospital. *Botany. First Class*.—King, Arthur, Prel. Sci. (Exhibition), University of Edinburgh. *Second Class*.—Stuart, Charles Ed., First B.Sc., University College and private study. *Third Class*.—Halliburton, Wm. D., Prel. Sci., University College; Champ, John H., Prel. Sci., Guy's Hospital. *Zoology. First Class*.—Overend, Walker, Prel. Sci. (Exhibition), Royal School of Mines and St. Bartholomew's Hospital; Frankland, Percy Faraday, Prel. Sci., Royal School of Mines and University College; obtained the number of marks qualifying for the Exhibition or for the Prize; Bourne, Alfred Gibbs, Prel. Sci., University College; Fletcher, J. J., Prel. Sci., University College and Royal School of Mines; Forrest, James R., Prel. Sci., University College; Halliburton, W. D., Prel. Sci., University College; Tunzelmann, E. Waldemar von, Prel. Sci., University College, equal. *Second Class*.—Parry-Jones, Maurice, Prel. Sci., University College; Radford, Edwin, First B.Sc., University College; Steel, John Henry, First B.Sc., private study; Weldon, Walter F.R., Prel. Sci., St. John's College, Cambridge, equal. *Third Class*.—Berry, James, Prel. Sci., St. Bartholomew's Hospital; Roberts, Edward, Prel. Sci., Guy's Hospital and Epsom College, equal.

The following candidates passed the recent First M.B. Examination: *Entire Examination.*—*First Division*.—Bassett, Henry Thurston, Queen's College, Birmingham, and Guy's Hospital; Bowe, Francis, St. Bartholomew's Hospital; Bredin, Richard, Liverpool Royal Infirmary School of Medicine; Cantin, Louis Alfred, St. Bartholomew's Hospital; Chisholm, William, B.A. Sydney, University College; Colborne, William Wriothesley, University College; Cox, Frederick Augustus, St. Mary's Hospital; Cuffe, Edward Meade, St. Bartholomew's Hospital; Day, Donald Douglas, St. Bartholomew's Hospital; Dickinson, Thomas Vincent, St. George's Hospital; Graham, Albert William, St. Bartholomew's Hospital; Honeyburne, Richard, Liverpool Royal Infirmary School of Medicine; Hoole, Henry, Charing Cross Hospital; Horsley, Victor Alexander Haden, University College; Jones, Robert, St. Bartholomew's Hospital; King, David Alexander, St. Bartholomew's Hospital; Kirsopp, Thomas, St. Bartholomew's Hospital; M'Donnell, Denis, King's College; Maguire, Robert, Owens College; Maudsley, Henry, University College;

Mott, Frederick Walter, University College; Murray, Hubert Montague, University College; Newsholme, Arthur, St. Thomas's Hospital; Parker, William Rushton, University College; Parkes, Louis Coltman, University College; Pasteur, William, University College; Permewan, Arthur Edward, University College; Pratt, Reginald, University College; Rake, Beaven Neave, Guy's Hospital; Shaw, John, St. Thomas's Hospital; Shearman, Percy Edward, University College; Weber, Charles Alfred, B.A., B.Sc., St. George's Hospital. *Second Division*.—Atmaran, Anundrao, B.Sc., University College; Ballance, Charles Alfred, St. Thomas's Hospital; Brooke, Henry Ambrose Grundy, B.A., Owens College; Collingwood, David, Liverpool Royal Infirmary School of Medicine; Collins, William Job, St. Bartholomew's Hospital; Dallmeyer, Andrew William, University College; Davidson, John, King's College; Donovan, Denis William, University College; Groom, Henry Thomas, St. Bartholomew's Hospital; Hoskyn, Donald Templeton, University College; Hurst, George, B.A. Sydney, University of Edinburgh; Marsh, George Ryding, Guy's Hospital; Oram, Richard Rundell William, Guy's Hospital; Rice, Edward, St. Bartholomew's Hospital; Routh, Amand Jules M'Connell, University College; Silk, John Frederick William, King's College; Smith, Henry, St. Bartholomew's Hospital; Squire, John Edward, University College; Swale, Harold, St. Thomas's Hospital; Sykes, William Ainsley, St. Bartholomew's Hospital; Tait, Edward Sabine, St. Bartholomew's Hospital; Thomas, Walter Duncan, St. Bartholomew's Hospital; Walters, Frederick Rufenacht, St. Thomas's Hospital; Watkins, Christopher James, University College; White, Charles Haydon, St. Thomas's Hospital. *Excluding Physiology. First Division*.—Barnes, George Frederick, St. Bartholomew's Hospital; Sellers, William, University of Edinburgh. *Second Division*.—Smith, John, Guy's Hospital; Whiting, John, St. Bartholomew's Hospital. *Physiology only. Second Division*.—Crisp, Thomas, St. Thomas's Hospital; Fooks, George Ernest, St. Bartholomew's Hospital; Hughes, Richard, St. Bartholomew's Hospital; Roedel, Waldemar Joseph, St. Bartholomew's Hospital; Suckling, Cornelius William, Birmingham School of Medicine.

The following candidates passed the Examination for Honours: *Anatomy. First Class*.—Shaw, John (Exhibition and Gold Medal), St. Thomas's Hospital; Horsley, Victor Alexander Haden (Gold Medal), University College. *Third Class*.—Shearman, Percy Edward, University College. *Histology and Physiology. First Class*.—Bredin, Richard (Gold Medal), Liverpool Royal Infirmary School of Medicine; Weber, Charles Alfred (Gold Medal), B.A., B.Sc., St. George's Hospital; Maguire, Robert, Owens College; King, David Alexander, St. Bartholomew's Hospital; Horsley, Victor Alexander Haden, University College; Shearman, Percy Edward, University College; Shaw, John, St. Thomas's Hospital. *Second Class*.—Cantin, Louis Alfred, St. Bartholomew's Hospital; Permewan, Arthur Edward, University College, equal; M'Donnell, Denis, King's College; Rake, Beaven Neave, Guy's Hospital, equal; Parkes, Louis Coltman, University College; Kirsopp, Thomas, St. Bartholomew's Hospital; Parker, William Rushton, University College, equal. *Third Class*.—Bassett, Henry Thurston, Queen's College, Birmingham, and Guy's Hospital; Thomas, Walter Duncan, St. Bartholomew's Hospital; Hoole, Henry, Charing Cross Hospital; Dickinson, Thomas Vincent, St. George's Hospital. *Organic Chemistry. First Class*.—Bredin, Richard (Exhibition and Gold Medal), Liverpool Royal Infirmary School of Medicine; Rake, Beaven Neave, Guy's Hospital; Maguire, Robert, Owens College. *Materia Medica and Pharmaceutical Chemistry. First Class*.—Shearman, Percy Edward (Exhibition and Gold Medal), University College; Shaw, John, St. Thomas's College, obtained the number of marks qualifying for the Exhibition; Maudsley, Henry, University College. *Second Class*.—Permewan, Arthur Edward, University College; Newsholme, Arthur, St. Thomas's Hospital; Rake, Beaven Neave, Guy's Hospital, equal.

# The London Medical Record.

## CHARCOT ON HYSTERICAL CONTRACTION OF THE LEFT WRIST, TREATED BY REPEATED ARTIFICIAL PRODUCTION OF CONTRACTION OF THE RIGHT WRIST.

By Dr. ROMAIN VIGOUROUX.\*

THE observation now published under this heading appears interesting from both clinical and therapeutical points of view. It concerns a by no means common form of hysteria, and the treatment, successfully practised, of one of the most obstinate of its manifestations. This treatment is based upon a new principle; moreover, it presents the application of some of the proceedings actually employed in M. Charcot's laboratory in the study of hysteria. We shall append to the report of the case such comments as may be suggested to us from these different points of view.

CASE.—Pauline J., aged 26, admitted June 3, was formerly a servant, but for the last five years had been a nursing religious sister. She was tall, of healthy aspect, without much fat; the breasts were scarcely indicated, the eyes and hair were brown, the complexion dark; there was no family history; the previous health had been good; menstruation had been regular since she was seventeen years of age, moderate in amount, always preceded by lumbar and hypogastric pain. On July 17, 1874, after having fatigued herself by carrying some wine into a cellar, she unfortunately sat down to rest herself; she was bathed in sweat, and in the midst of a menstrual period. A violent rigor warned her of her imprudence; she went out, but the shivering and sensation of cold persisted, and the surface of the body became so sensitive that the touch of her clothes was painful. She went to bed. An intense headache supervened, characterised by shooting pains, which, starting from different parts of the head, converged towards the vertex, and drew cries of pain from the patient. The shivering ceased after having lasted two hours, but the sensation of cold persisted; it was uselessly combated by sinapisms, and only gave way on the appearance of fever. This lasted eight days, accompanied by delirium. After the fever was over, the pain in the head persisted without diminution until the fourteenth day, in spite of the different sedative means used, among which were hypodermic injections of morphia. The headache was succeeded by colic, at least so the patient called the hypogastric pains or gripings reaching round the loins; this prevented sleep for forty-eight hours, then disappeared to return after five or six days. This stage of her disease lasted altogether a month, and at the end of that time the patient got up, much emaciated from her sufferings and her almost complete abstinence during that period. From that time was established an alternation of hypogastric pains with relatively calm intervals, occupying, however, only about a fourth part of the whole. These crises were invariably accom-

panied by retention of urine, which necessitated catheterism. The first time retention lasted a month and ceased the day after menstruation occurred. Things remained much the same for three years. The patient was admitted into the hospital of her native town, where she made herself useful during the temporary remissions of her malady. During these three years the hypogastric attacks were replaced on three or four occasions by incessant vomiting, which did not permit the ingestion of a spoonful of fluid, and lasted two or three weeks; notwithstanding, she preserved her *embonpoint* and appearance. The original headache, rather more severe, continued with exacerbations. Sudden movements caused faintness and vertigo. From August to the end of November 1877, she was rather better, and although feeble, did regular duty in the hospital. One evening, after having suffered more than usual during the day, she felt, while at her work, a numbness in the left hand. She tried to raise it, but the limb fell powerless. It was rubbed, and she perceived that sensibility as well as motion had disappeared. In the night the headache became worse, and a sort of coma supervened which lasted three days. To this succeeded somnolency for nine days, during which time she vaguely comprehended what was going on around her, and suffered from a violent pain in the whole head. Leeches were first applied, and then for twelve days an ice-bag was kept on her head, and she was put on low diet. The headache gradually disappeared, but her head remained heavy, with tendency to vertigo and perpetual *clavus hystericus*. In spite of this, from this time her appetite and sleep became almost good. The left hand, at first flaccid, rapidly became stiff. After three weeks it was perfectly closed, and in order to protect the palm from injury by the nails, a small pad was introduced which had remained in use ever since. Soon afterwards, the wrist became flexed in the forearm, and by February the contraction had reached its present degree. Since the commencement of her illness she had noticed that the left leg had become feebler. She had not noticed anything similar in the superior extremity of the same side, which she had continued to use by preference, being always left-handed. Her disposition also had changed; from being very equable she had become impressionable, easily giving way to joy, melancholy, chagrin, and especially to anger. All these emotions were accompanied by the sensation of a ball, which formed at the epigastrium, rose in the gullet, and obstructed respiration; at the same time she had singing in the ears, and beating in the temples, especially on the left side. The scene terminated sometimes by tears, which did not show themselves until the last extreme, sometimes by a general stupor, which yielded to slight cold sprinkling of the face. She never had had regular hysterical convulsive fits (*des grandes attaques*).

On admission, her general condition and appearance were not in relation to the gravity and duration of her symptoms. The gums and conjunctivæ did not present notable pallor; there were no hæmic murmurs. The left arm was supported by a sling: when this was removed, the limb fell down by the body. The hand was flexed at a right angle with the forearm: the fingers were also flexed, and indented the pad of linen referred to. The fingers could not be opened, nor the flexion of the wrist diminished, even with the use of considerable force. The elbow and shoulder joints were free, but their voluntary movements were completely abolished, as

\* *Progrès Médical*, August 31st, 1878.



well as the movement *en masse* of the shoulder itself. The size of the limb was not sensibly diminished; The skin was pale, and the uncontracted muscles were soft. Faradic contractility was intact. She had no knowledge of the position in which the limb was placed, nor of pressure made upon it, nor of painful experiments practised. Anaesthesia was complete, and was very exactly limited above by a line which, leaving the axillary border of the scapula, followed the inner border of this bone, and descended in front over the clavicle and pectoralis major to regain its starting point. In addition, there was analgesia of the left half of the face; hearing had long been abolished on the left side, on which the tinnitus was most marked. The left eye was not affected by achromatopsia, but its normal visual acuity was much diminished. The left nostril perceived, but less than the right, the odour of ether or vinegar. The left half of the tongue was not affected by pricking, nor by colocynth powder; the right half preserved its excitability very well. Pressure with the finger on the vertex was very painful, also in all the length of the vertebral fossa, without there being any circumscribed neuralgic spot. There was a spontaneous permanent pain in the ovarian regions, exasperated by pressure on both sides, but not producing irradiations upwards. Finally, there were loss of appetite and habitual constipation.

*Treatment.*—The hysterical action of the affection had been recognised by Dr. Barbet in her native town, and he had ineffectually tried metallic applications. M. Charcot preferred not to renew these attempts, but to have recourse to more energetic means. At first it was sought to act directly upon the affected limb, and from the 3rd to the 11th of June were used successively: an electro-magnet of great size and power, the solenoid, a steel magnet, the continuous current, the induced current, and static electricity. The effect upon the anaesthesia was *nil*. Intense faradisation with the brush or metallic electrodes and the induced current reduced the contraction momentarily by tetanising the antagonist muscles. This result was most easily obtained when the electrode was applied over the extensor tendons; but when the current ceased to pass the fingers recovered their rigidity. Strong electrical discharges directed upon the extensors had an analogous action.

June 11. The solenoid was applied to the right hand. After twenty minutes, sensibility to pricking commenced to diminish in the neighbourhood of the apparatus, and little by little disappeared over the remainder of the hand, which became cold and livid. After fourteen minutes, analgesia was complete to the wrist. There were sensation of cold, and numbness of the part. After forty-five minutes the analgesia occupied the lower half of the forearm. After an hour it had made no further progress; the hand was cold, and covered with viscid sweat. No change was observed in the left hand.

June 12. There remained no traces of the analgesia of the preceding evening. At five minutes past eleven a horseshoe magnet was applied to the upper third of the dorsal surface of the right forearm. The piles were placed one upon another in the axis of the limb, and they were covered with a compress to prevent her from touching the metal. At seventeen minutes past eleven there was diminution of sensibility in the neighbourhood of the piles, and increasing sensation of cold and stiffness in the hand, which became moist. At half-past eleven the analgesia extended to two centimètres above and ten be-

low the magnet. It advanced a little transversely; the palmar aspect of the forearm was still sensitive at the level of the forearm. At twelve o'clock the analgesia had not extended towards the elbow. Upon the dorsal aspect it extended to the fingers, and was also enlarged transversely so as to occupy the palmar surface of the forearm and hand, but the pulps of the fingers remained sensitive. She had pricking in the whole forearm, with sensation of cold and heaviness of the hand. The fingers were flexed with the thumb inside; she could move them with difficulty. At half-past twelve sensibility had disappeared in the pulps of the fingers. The stiffness was greater; the right hand in comparison with the left presented a lowering of temperature, which was very appreciable to the touch. The left hand was attempted to be opened; this was done as usual by energetically rubbing the extensor tendons on the back of the wrist, while the contracted fingers were endeavoured to be extended. This time the resistance was manifestly less than formerly. At ten minutes to one, the contraction in the right hand had become stronger and stronger. Even with great effort she could only extend the first phalanges; the two last remained flexed and rigid, forming the claw-hand (*la griffe*). Extension of the fingers could only be effected by energetic and prolonged traction, while the middle finger resisted all efforts. The comparative temperature of the surfaces of the two forearms was taken with the surface-thermometers of Dr. Mortimer Granville; a quarter of an hour after being applied they indicated  $30\frac{3}{4}$  Cent. (86.7 Fahr.) on the left, and  $27\frac{3}{4}$  Cent. (81.7 Fahr.) on the right. At a quarter past one the pricking continued on the right; the hand presented the same aspect as that of the affected side, except that the wrist was not flexed. It was again ascertained that the fingers of the left side were less stiff. After this the provoked contraction was made to disappear, which was easily done by faradising the antagonising muscles. The sensibility of the left hand had not varied. During the whole of the experiment, she complained of insupportable pain in the ovarian regions.

June 15. At a quarter past nine the same magnetic pile was applied to the palmar aspect of the healthy arm. After five minutes, there was analgesia at the level of the poles, extending rapidly to the entire hand, which became cold. At a quarter past nine, analgesia of the forearm was complete; as in the previous experiment, it did not trespass beyond the limits of the superior border of the magnet. The contraction of the flexors was already very pronounced. At a quarter to eleven there was no change in the analgesia. The contraction was stronger, and there was impossibility of detaching the fingers, which were closed upon the thumb. At twenty minutes past eleven the state was the same; the nails of the last two fingers were pressed into the palm. The wrist remained extended, but the tendon of the palmaris longus was strongly marked. The lateral movements of the wrist were very limited. There were the same sensations as in the previous experiment, and the same cooling of the hand. Diminution of rigidity in the affected hand was observed again; it grasped the pad only feebly. In the hope of seeing the contraction disappear entirely, faradisation was practised, but the only result obtained was that the fingers, and especially the index, recovered their vicious position immediately after having been extended. The right hand, left alone for an hour, remained insensible, cold, and contracted. Prolonged electrification did not succeed

in restoring it to its original condition, and the patient retired, preserving marked paresis with diminished sensibility of the forearm and hand, and tendency to contraction of the fingers.

June 17.—Sensibility had returned on the right side, but the feebleness persisted. All attempts to provoke contraction were abstained from. The dorsal surface of the affected forearm was electrised with the induced current for some minutes. During the operation the patient complained suddenly of a painful darting in the end of the thumb, although the electrodes had not been applied to this part. The electrification was continued, and the pain recurred. It was then observed that the entire region of the thumb and first metacarpal bone had recovered their sensibility. After the sitting, the fingers and the wrist became again flexed.

June 18.—The magnet was applied to the right arm as usual; the result was as before—analgesia not passing above the magnet, pricklings, sensations of cold, and contraction. Moreover a complete paralysis of the arm and shoulder was produced, although the skin of these parts had preserved its sensibility. It was difficult to restore the limb to some degree of mobility by faradisation. After the sitting there remained pronounced paresis, and the analgesia persisted. On the left side the hand was more supple; the radial border preserved the sensibility it acquired on the previous day. The faradic current easily provoked extension of the hand and fingers, and this was more persisting. During electrification, sensibility returned to the little finger and the hypothenar eminence, in exactly the same manner as it appeared in the thumb, that is to say, heralded by painful twinges in the end of the finger.

June 19. The feebleness of the night before persisted in the right limb. The pressure of the hand reached only three kilogrammes of Burq's dynamometer. The forearm was placed between the poles of a large electro-magnet, which, however, was not of its usual strength, owing to the exhaustion of the pile. The contraction of the finger, and paralysis of the rest of the limb, were complete after twenty minutes, followed by the usual phenomena. Short faradisation (always with the current of the thin coil) of the left forearm was performed. Sensibility returned in the latter two phalanges of the middle finger, in the same manner as in the little finger and thumb.

June 20.—On the right the artificial paralysis of the whole upper limb and the analgesia of the forearm persisted. On the left, faradisation succeeded in effecting extension of the fingers.

June 21.—The paralysis of the left upper extremity was stationary; the contraction of the wrist was less rigid, that of the fingers had not varied; on the forearm and hand the sensibility of the radial and ulnar margins extended nearly to the elbow, comprehending below the little finger and hypothenar on one side, and the thumb and thenar on the other. These two bands of anaesthesia were only separated in the palm of the hand by a narrow space. The middle finger was less sensitive throughout to the palmar fold in front, and the head of the metacarpal bone behind. This sensibility of the forearm and of the hand was perfect. The usual application of the magnet was made to the right forearm; contraction occurred; anaesthesia did not surpass the superior borders of the magnet, but the arm and shoulders were paralysed. A novelty was observed;

namely, the diminution of sensibility coincided with a sensation of heat and a marked degree of hyperaemia of the skin, instead of being accompanied by subjective and objective lowering of temperature. The region appeared also warmer to the touch than the other side. The two forearms were faradised, after which the two hands remained extended. The left wrist was quite supple, and, when it lay on the dorsal surface, the fingers were scarcely flexed. As to movement, the paralysis of the upper limb was equal on both sides. The suppleness of the left hand lasted an hour and a half, then the fingers recommenced to stiffen.

June 22nd.—The experiments of the preceding day left considerable weakness in the right hand. The following changes in the general sensibility were found to exist. There was hemianalgesia of the head and neck on the left side, in continuity with anaesthesia of the shoulder. The left eye did not perceive violet, its visual acuity had not varied. The magnet was applied to the palmar surface of the right forearm. After six minutes contraction commenced, and was complete after a quarter of an hour. At the same time, the left forearm was lightly faradised. This immediately resulted in extension of the fingers. During this operation sensibility returned in the ring-finger, preceded, as in all the others, by pains at the extremity; the pulp of the finger first became sensitive to contact; an hour afterwards, the last two phalanges became sensitive to contact and pain, but more completely on the palmar aspect. The left hand had remained open.

June 24th.—The left wrist was no longer flexed. The fingers, movable enough, were in a semi-flexed position. The sensibility of the limb had not varied; the left half of the neck and face was less analgesic than two days ago; the perception of violet was re-established. On the right, sensibility had become normal in the upper limb; but the debility was still great; pressure of the hand on the dynamometer was *nil*. The magnet was applied to the right arm with the usual results. Light faradisation was applied to the left limb, especially at the level of the radial fossa of the humerus. At that moment, painful twinges in the index occurred; the last phalanx of this finger had become sensitive to pricking. During this time, the artificial anaesthesia of the right arm had become completely developed up to its usual superior limit; there was no *transference*, the same as on preceding days. The temperature of the forearm was evidently lowered. The rest of the limb was paralysed. An hour after the removal of the magnet the state was the same, except a slight movement of pronation, which was possible.

June 25th.—On the left side the hand and fingers were completely supple. Sensibility had extended to the whole of the second phalanx of the index finger; upon the side of the forearm it reached the elbow. The paralysis of movement had not varied. On the right there remained a marked paresis from the experiments of yesterday; but sensation was perfect. Contraction was induced; it occurred rather more slowly than on preceding days; moreover, it was not accompanied by lowering of temperature.

June 26th.—The left hand preserved its suppleness; there was no other change. The magnet was applied to the right side. Contraction was more rapidly established, and without lowering of temperature (objective or subjective).

June 27th.—The magnet was applied on the right side, without notable peculiarities. On the left, the



lateral sensitive zones on the forearm were almost contiguous above, posteriorly.

June 28th and 29th.—The magnet was applied to the right side.

July 2nd.—On the left side, the state was the same; on the right, the magnet produced contraction, rapidly and completely. There was little or no lowering of temperature; moreover, the diminution of sensibility was scarcely marked.

July 3rd.—The anæsthetic zones on the left forearm had disappeared; sensibility had gained the arm, of which it occupied the lower third.

July 4th.—The magnet was applied first to the right, then to the left arm, a quarter of an hour to each. On the left, it reproduced entirely the former morbid state, with loss of the sensibility recently regained. On the right, contraction occurred, as in the former experiments.

July 5th.—Both contractions lasted, yesterday, up to the evening, but gradually became weaker. This morning the left limb was, in all its relations, in the same state as before the experiment. The right had remained extremely feeble. There was induced contraction on the right side.

July 7th.—The magnet was applied to the right side.

July 8th.—Our attention was now directed to the general condition of the patient. In the last few days she had menstruated, but only scantily. The catamenia were always preceded and accompanied by a swelling in the neck (probably of the thyroid body), and followed by a sort of migraine, which this time lasted thirty-six hours. Since her admission, she had never ceased complaining of ovarian pain. At present there were pronounced gastric derangement, general debility, and almost total loss of voice. A cathartico-emetic dose was prescribed.

July 9th.—Her general condition was better. Contraction was induced.

July 11th.—Contraction was induced on both sides. It disappeared rapidly, upon the insulated stool of the electric machine, by the employment of the electric spark.

July 12th.—Double contraction was induced by operating simultaneously on both sides. On the right, the usual horse-shoe magnet was applied; on the left a straight magnetic bar, presented by one of its ends. Two hours afterwards, the contraction showed no tendency to disappear spontaneously. The patient was then placed upon the insulated stool, and the spark produced by approaching the metallic point made the contractions disappear in two or three minutes. Directly afterwards, by the same means, the parts still anæsthetic in the left side were electrified; that is to say, the superior half of the arm and the scapula. A sharp pain was felt at the acromion, not produced by the intensity of the electrification, which was very moderate. The skin of this region became sensitive to pricking. The electrification was continued; sensibility extended more and more; the lower angle of the scapula was the last point freed; now it had completely disappeared, and the little electric sparks everywhere excited a painful sensation. At the end of the sitting, which lasted twelve minutes, the thumb of the left hand commenced to move, although very feebly, under the influence of the will. It was remembered that sensibility also had returned first by the thumb.

July 13th.—The sensibility acquired yesterday had persisted entirely. That of the right side was not diminished. The feeble movement of the right

thumb was also preserved. The sharp pain in the shoulder continued to be felt. Contraction on the right side was induced, and afterwards suppressed by faradisation. Before retiring, the patient showed us that the little finger of the left commenced to move.

July 14th.—Contraction was induced on both sides simultaneously. That on the left was very rapid, with lowering of temperature, and anæsthesia. Static electricity restored the former state of things. At one time, the sensitiveness to pricking and sparks was less intense on the right. This difference disappeared during the operation. Towards the end of the sitting, voluntary movement returned in the index, the ring, and middle fingers, without its being observed in what order it occurred. Half an hour later, the patient showed us that the movements of the fingers had gained in extent.

July 15th.—The movements of the fingers were sufficiently free, but slow and feeble. The paralysis of the rest of the limb was not modified. The pain in the shoulder persisted, but to a less degree. Static electricity was applied. There was again a relative diminution of electro-cutaneous sensibility on the right. After the sitting, the patient could extend or flex the hand on the forearm, but in very restricted limits. There were also some voluntary movements of the biceps and triceps, but insufficient to move the limb.

July 17th.—There were movements of flexion and extension of the forearm. The contraction was induced more and more easily on the right side, and became more persistent, even with the employment of static electricity. The pain in the left shoulder had nearly disappeared.

July 19th.—Artificial contraction was obtained easily, and, as had been the case for some time, not accompanied by anæsthesia nor refrigeration. Feeble static electrification was applied.

July 20th.—Static electrification was applied. During the sitting a sharp pain was felt in the left elbow, with the characters of that which occurred in the shoulder for some days. There was a little less electro-cutaneous sensibility on the right; no other change.

July 21st.—The artificial contraction was induced more and more easily, always without anæsthesia, and yielded only to prolonged electrification.

July 23rd.—Artificial contraction was induced. Static electrification was applied. There was equal sensibility on the two sides. The pain in the elbow had disappeared.

Her state at the last date was as follows. The right upper limb possessed, in the intervals between the experiments, all its movements, and all its sensibility, only it was feeble, and this the more if contraction had been recently provoked. On the left side the old anæsthesia had completely disappeared, also the contraction; but voluntary movements only were present in the fingers and wrist; moreover, they were slow and feeble. The sensibility of other regions, and the organs of sense, had been restored under the influence of static electricity; excepting the deafness on the left side, which persisted, and which therefore was possibly not hysterical. The other symptoms of loss of appetite, dyspepsia, and ovarian pain were not improved. The treatment was to be continued, following the same method for the local affection. For the disease itself, static electricity was to be used so far as circumstances permitted.

[This case illustrates so well M. Charcot's procedure, that it is published *in extenso*.—*Rep.*]

ROBERT SAUNDY, M.D.

(To be Concluded.)

## REMARKS ON SCARLATINA FOLLOWING SURGICAL OPERATIONS.\*

By M. TRÉLAT.

THE facts which I have to lay before you are not taken from our hospital practice, but they are so unfrequent and so little known, that I thought it might be advantageous to bring the subject under your notice. My notes will permit me to pourtray faithfully the facts of these interesting cases. Before proceeding to discuss the fact itself, I will briefly relate the cases.

Three months ago, I was summoned to a child that I had previously attended for coxalgia. In the month of December last, the child had taken measles. Convalescence from this had been slow and painful, and had left the patient with but little vigour; the traces of feebleness were very marked. Some days before I saw him, the patient was seized with a pain and swelling in the side of the thigh. The examination made by my colleague, M. Hardy, and myself, revealed an abscess in the anterior region of the thigh, which was partly subaponeurotic, and partly subcutaneous. This abscess did not seem to have a bony origin, and I regarded it as one of the critical abscesses of the eruptive fevers. I should say that to-day I am inclined to qualify that statement; for the slowness of the cicatrisation suggests the idea of a secondary abscess due to a deeply seated affection of bone. The abscess was emptied by a drainage-tube; the quantity of pus was so little and the abscess-cavity so small, that at the end of fifteen days I withdrew the tube. The upper orifice healed, the lower one still remained open. At the end of three weeks, I changed the treatment and exerted compression; notwithstanding all, the fistulous track healed only at its periphery. I wished to split up the sinus above and below where it had contracted. The thing was simple; and, cutting with a pair of scissors, I laid open the cavity. I left my patient, persuaded that all would go well, and that a cure would soon result. Next day, there was a sharp attack of fever, with soreness of the throat, and in less than twenty-four hours a general eruption, so that the young physician who had charge of the case did not hesitate to diagnose scarlatina. M. Hardy, who was called in consultation, had no difficulty in confirming this diagnosis. The case was clear. At its commencement the scarlatina developed well, but its termination was marked by peculiarities in the febrile cycle, in the manner of desquamation, etc. During the whole time the fistula suppurated, the wound presenting an unhealthy livid appearance; and matters only improved slowly, in a favourable season, after the patient had been removed to the country. To resume: an attack of scarlatina appeared the day following an insignificant operation; the later phases of the eruption being characterised by a course a little abnormal, restoration to health being slow, and there being very pronounced difficulties in the region of the wound.

I was very much struck with these particulars, and was trying to find an explanation, when chance per-

mitted me to witness a second case in every way resembling the first. On April 11th, I was consulted by a young man, seventeen years of age, of a profoundly lymphatic temperament, who was passing the winter in the South, where he had shown in succession many proofs of his diathesis, notably a cold abscess at the lower part of the right thigh. I found that, under an appearance of corpulence acquired during his sojourn on the borders of the Mediterranean, this young man unwisely concealed a series of circumstances, which, though little pronounced, were quite characteristic. On different parts of his body were found superficial scrofulous ulcerations, especially on the hands and the buttocks; the epididymis on the right side was the seat of an abscess, probably of a tubercular origin; the prostate presented well-marked edges. In the inguino-crural fold were found two fistulous orifices, the result of the opening of an abscess; above the pubes, on the left side, existed a cold abscess, very large in volume. It was for this last lesion, more especially, that he sought my advice. The diagnosis was easy: a scrofulous diathesis, with many manifestations; genito-urinary tuberculosis threatening. There was urgent indication to empty the cavities of pus; my proposition was accepted. The next day (Sunday) I opened the small abscess in the tail of the epididymis, and I evacuated the suprapubic abscess by means of the aspirator. The young man, who was intelligent and reasonable, was not in the least disturbed by this little operation, which was made without difficulty. The next morning, I was hastily summoned. In the night, towards four o'clock in the morning, the patient became markedly feverish, depressed, and fatigued. He had vomited whatever was taken. The patient's physician believed the symptoms to point towards acute septicæmia, following the operation. Upon my first visit, I refused to accept this accident as the result of the operation. I found nothing that would explain these symptoms, but I could not see any septicæmia. On the Tuesday evening, the general signs made me incline to the idea of an eruptive fever; and, indeed, the day following, there appeared the scarlatinal exanthem, with the characteristic throat. It was not until this time that the idea of scarlatina prevailed with my *confrère*, for, until the first appearance of the eruption, he still believed in septicæmic influences. I rejected this diagnosis, for I had not found any signs of septicæmic fever; and the more so, because there was no phenomenon in the site of the abscess I had emptied; no trace of the puncture-wound was to be found. The scarlatina developed regularly. Towards the end, albuminuria showed itself; but the albuminuria only appeared just at the time when there was a retention of pus and a certain gaseous accumulation in the suprapubic abscess. Following daily the temperature-curve, we saw declining the fever dependent upon the scarlatina; then, towards the close an unusual elevation took place, according to the view of M. Gosselin and myself, due to the retention of pus. The cavity was therefore drained; the temperature rapidly fell, and immediately the albuminuria disappeared.

Here, then, are two cases, at first sight very simple, but yet, when studied more minutely, offering something unusual. The day following an operation, the patient having previously presented nothing abnormal, a very abrupt eruptive fever appears. Here I detect you pronouncing the word "coincidence", "chance". At first, that was my own idea; but you will see that these facts have not been ob-

\* *Le Progrès Médical*, September 14th, 1878.



served for the first time to-day, and that I am not alone in having remarked the appearance of this manifestation.

In 1858, M. Germain Sée, after a tracheotomy, noticed an eruption closely allied to scarlatina. In 1864, in a communication to the Pathological Society of London, Mr. Maunder stated, that he had seen scarlatina supervene after two lithotomies had been performed upon children. The discussion which followed brought to light a certain number of similar facts. Dr. Broadbent had seen three cases; Dr. Crisp, a fatal case after circumcision; Mr. Calender, a case after lithotomy; Mr. H. Lee, three cases; Dr. Martin, one case.

In 1868, my colleague and friend, M. Verneuil, published (*Gaz. Hebdomad.*, No. 46, 1868), and subsequently through his pupils (Tremblay, *Gaz. Hebdomad.*, 1870, et *Thèse de Paris*, 1876), some observations on cutaneous manifestations, some true eruptions following septicæmic conditions. I should say the facts which I have submitted to you, though they approach to a certain point the observations of M. Verneuil, yet differ from other points of view. I do not consider my two patients as having been victims of septicæmic poisoning; and, to start with, I do not regard scarlatina as having an infectious traumatic cause, under whatever name you like to veil it. I pass on, to return later to these points of doctrine. In a work recently translated into French (*Leçons de Clinique Chirurgicale*, Traduction de M. Petit, 1877), Sir J. Paget has devoted a short chapter to the explanation of analogous facts. He mentions ten cases observed in children. Mr. Howard Marsh, in an additional note to the chapter, confirms, on all points, the opinion of Paget, and reports eight cases. Mr. Thomas Smith (in the same note) says that, in forty-three children upon whom he practised lithotomy, seven had scarlatina, and the eruption followed according as it appeared on the first to the third day after the operation. One of my pupils, M. Cartaz, observed the following case during the campaign of 1870. A young guard, aged 20, was brought to the ambulance with a penetrating wound of the knee, caused by a firearm. Resection of the knee was practised four days after the injury, the patient refusing amputation. The third day after the operation, scarlatina appeared, the diagnosis of which was only tardily arrived at, as at first, before the eruptive stage, it was believed to be pyæmia, on account of the intensity of the fever. No scarlatina existed at that time in the ambulance; but ten days afterwards two cases were noted. Here are a group of facts (nearly forty) which impose a certain reserve in their interpretation. What happens? In the majority of cases we see that young subjects are attacked; in nearly all, very shortly after an operation, an exanthem appears; then the scarlatina runs a course a little abnormal; sometimes the throat is at fault, sometimes the desquamation; the malady seems to run a typical course, but not quite characteristic. It is asked, if there is any doubt in these cases of scarlatina? I do not believe that it is possible to call in question the diagnosis of scarlatina made by such experienced physicians. In the particular cases which I have seen, to remove all doubt, I have called in consultation many of my colleagues, and there was no hesitation on their part in recognising the eruptive fever. This point, then, seems to me to be established beyond dispute. It is not the same with regard to the question, what connection there is between traumatism and the appearance of scarlatina. It is impossible that none exists; but what is it? I

frankly tell you I know none. Hypotheses, with a semblance of truth, have been formulated, and I am disposed to accept certain of them; but of the true intimate relationship we are ignorant. In his lectures with regard to this, Paget expresses himself thus: "Scarlatina is in some way connected with the early consequences of operations. If it were not so, there would be no reason why the eruption should appear early, rather than late, after the operation. Two explanations may be offered of this fact. Either the condition induced in a patient by a surgical operation is one that gives a peculiar liability to the reception of an epidemic or contagious morbid poison, and any one of these, being imbibed immediately after the operation, produces its specific effect in much less than the usual period of incubation: or else those who suffer with scarlatina within a few days after operations, had previously imbibed the poison, but would not have manifested its effects so soon, if at all, unless their health had been exhausted or disturbed."

These explanations are the most logical; but they do not give us the key to their reconciliation. It is surprising, in every case, that scarlatina should be the only eruptive fever which shows itself after a traumatism. I am not aware that it has been noted that measles or any other fevers of the same class have occurred after operations. These facts are the more remarkable and worthy of study, as for a long time scarlatina has been known to follow delivery in conditions analogous to scarlatina after operations.

M. Hervieux, in an epidemic which he observed, found that the patients of the Maternity Hospital, who were attacked, presented symptoms of the fever in the early days of the week following the confinement, and then there was no epidemic of scarlatina in Paris.

In more recent times, gynæcologists have been much occupied with this question; and an interesting discussion was raised two years ago at the Obstetrical Society of London, some wishing to make scarlatina play a particular rôle in the pathogenesis of puerperal fever, others seeing a frequent complication, presenting ties of reconciliation with the traumatism of delivery. This puerperal scarlatina, as it has been designated, resembled in every point in its course and evolution that which I have described to you; the same rapid commencement about the second or third day after delivery, the frequent absence of premonitory symptoms, the irregular course and divergence from the normal type. In a long and important work, founded on no fewer than 141 observations, Olshausen has dealt with this subject. In reading his memoirs (*Archiv für Gynäkologie*, Band ix, Heft 11), you will see established the points of similarity between operative scarlatina, if I may express myself thus, and puerperal scarlatina. I could not advantageously enlarge upon this subject, which is still open to controversy; and I will conclude this lecture by placing a *résumé* before you in the form of propositions.

1. After slight operations, complications disquieting at the onset may arise, which are no other than those of scarlatina.

2. This scarlatina has not the features by which the disease is generally recognised: the commencement is more sudden, it appears in the first days after the traumatism; the throat is sometimes but little affected; in a word, the symptoms and course are anything but typical.

3. The wound, however small it may be, suffers from

the invasion and evolution of this complication ; its cicatrisation is greatly retarded.

4. The different septicæmic eruptions must not be confounded with this scarlatina ; the course and symptoms will make the diagnosis easy.

T. F. CHAVASSE, M.D.

## PAVY ON POINTS CONNECTED WITH DIABETES.

DR. F. W. PAVY devotes the Croonian lectures to this important subject (*Lancet*, vol. i, 1878, p. 447 *et seq.*). Starting with the tests of diabetic urine, Dr. Pavy gives the preference to a modification of Fehling's, as being the most delicate and reliable ; still, it does not act with the same sensitiveness in the presence of urinary matter as with a pure solution of sugar, so that it may fail to give a reaction when a minute portion of sugar is present in urine, while in water only the same quantity is distinctly revealed.

A question of primary importance in the study of diabetes, is to determine the quantity of sugar that normally exists in healthy urine. Brücke, some years ago, proposed a process for the separation of sugar by throwing it down in combination with oxide of lead, full details of the whole process for which will be found in *Guy's Hospital Reports* for 1876. By this process it is demonstrated that sugar exists in healthy urine in quantities varying from 0.276 to 0.096 per 1000 parts, and that the difference between health and diabetes, so far as the urine is concerned, is in reality one of degree and not of kind. If the small quantity of sugar which is beyond, or just within the reach of ordinary testing to reveal, has no clinical significance, it has, on the other hand, great importance with reference to considerations which stand at the basis of our views on the relations of sugar in the system. The knowledge obtainable from the urine is limited to that bearing on the outgoing from the body ; it does not unfold the nature of the internal phenomena, giving rise to the escape of sugar that occurs in diabetes. It was Dobson of Liverpool, towards the latter part of the eighteenth century, who first affirmed that sugar existed in the blood of diabetic patients as well as in the urine. It was Dr. Bernard's investigations that gave rise to his glycogenic theory, which has formed the foundation of our present knowledge, and created altogether a new era in the history of diabetes. Under the glycogenic theory, it was contended that the liver was endowed with the power of generating sugar and supplying it to the blood, thus placing the animal independent of the supply of sugar from without, and further that the lungs were the organs in which the sugar, circulating in the blood, was destroyed by oxidation. It is admitted, however, that this theory is not consistent with the results of deeper research. Now it is asserted by some that the destruction of sugar takes place in the peripheral capillaries, and chiefly those of the muscles ; but no precise account of the process is given. Summarily, it may be said, that the issue to be dealt with is, an ingress of sugar, on the one hand, into the circulation, through the hepatic veins, from alimentation and hepatic formation ; and its destruction, on the other hand, in the peripheral capillaries. If the destruction be equal to the supply, no accumulation in the system is possible ; if, however, the influx be in ex-

cess of the destruction, accumulation will occur as a necessary consequence. Dr. Bernard thought the influx was in excess in diabetes, and not that the power of destruction was lessened. Dr. Pavy, then a full believer in Dr. Bernard's views, that the lungs were the destroying organs, while conducting experiments twenty years since bearing upon the subject, found the fallacy of drawing conclusions from *post mortem* examinations of blood. His views and experiments, communicated to the Royal Society in 1858, which have since been confirmed by further observation, showed that, while blood taken immediately after death contained 10 to 20 parts per 1000 of sugar, blood, drawn by a catheter from the right side of the heart during life, contained a mere trace of sugar, 0.47, 0.58, and 0.73 parts per 1000. The liver, again, if properly treated, to prevent *post mortem* changes, yielded merely a trace of sugar instead of 20 per 1000. M. Bernard attempted to refute Dr. Pavy's experiments ; but his process of estimating sugar present is proved to be fallacious by Dr. Pavy's experiments, who reduces the oxide of copper employed in the testing to metallic copper by means of galvanism, and so, weighing the pure metal itself, obtains very precise results, which show that the average of six observations of blood from the dog, collected with requisite precautions to afford a representation of the natural state, yielded 0.787 parts of sugar per 1000 of blood ; from the sheep, 0.521 ; from the bullock, 0.543 per 1000. In the cat, the amount of sugar found in the liver, at the moment of death varied from 0.545 to 0.056 ; in the rabbit, from 0.597 to 0.069 ; in the dog (one observation), 0.315.

Sugar being introduced into the circulatory system, there is involved a necessity for its destruction or removal to obviate its accumulation. Bernard's latest views are, that the sugar is destroyed in the capillaries of the muscular and other general tissues of the body. That this theory is untenable, is shown by Dr. Pavy's analyses, which prove that the excess of sugar in arterial blood does not exceed 0.003 per 1000.

To recapitulate, before proceeding further, Dr. Pavy considers as proven, that only a small amount of sugar exists naturally in the blood ; that, corresponding with this small amount of sugar in the blood, there is a certain amount also, something under 0.5 per 1000, present in the urine ; and, lastly, that, if any difference exist in the amount of sugar of arterial and venous blood, it may be spoken of as of an insignificant nature. It is hardly possible to overrate the influence of the last consideration. In proportion to the ingress of sugar into the circulatory system, whether from the food or the liver, there must be removal by destruction or otherwise, to avoid accumulation. Put in converse terms, the proposition stands that, in proportion to the limitation in the capacity of destruction, so must be the limitation in the supply to the circulation, to prevent accumulation. Experience shows that, corresponding with the amount of sugar in the circulation, there is elimination with the urine ; and, therefore, whatever accumulation occurs, becomes revealed by the condition of the urine. The occurrence of sugar in healthy urine is of great significance, showing, as it does, that even with the small quantity of this principle naturally existing in the blood, an escape occurs with the urine. The urine thus furnishes an indication of the state of the blood. The following table most clearly shows that the character of the urine is expressive of that of the blood.



Comparative State of Blood and Urine in Diabetes.

URINE.						BLOOD.
	Quantity per 24 hours.	Speci- fic Gravi- ty.	Sugar per 1000 Parts.	Sugar grs. per fl. oz.	Sugar per 24 hours.	Sugar per 1000 parts, mean of 2 Analy- ses.
CASE I. Jan. 5. Mixed diet.	232 fl. oz. (6308 cc.)	1040	109.91	50.00	11,600 grains. (751.6 grammes)	5.763
CASE II. Jan. 8. Mixed diet.	228 fl. oz. (6474 cc.)	1041	94.08	42.85	9,769 grains (633.0 grammes)	5.545
Jan. 28. Restricted diet.	120 fl. oz. (3407 cc.)	1031	61.34	27.69	3,322 grains (215.2 grammes)	2.625
CASE III. June 8. Mixed diet.	207 fl. oz. (5878 cc.)	1036	93.39	42.33	8,762 grains (567.7 grammes)	4.970
July 20. Restricted diet.	87 fl. oz. (2470 cc.)	1033	45.49	20.55	1,787 grains (115.8 grammes)	2.789
CASE IV. March 9. Partially restricted diet.	60 fl. oz. (1704 cc.)	1036	48.11	21.81	1,308 grains (84.1 grammes)	1.848
June 28. Partially restricted diet.	30 fl. oz. (852 cc.)	1034	31.76	14.40	431 grains (27.9 grammes)	1.543

The table needs but little explanation. The blood examined was removed by cupping within the twenty-four hours, when the urine was examined. The first three patients suffered severely from the disease, the last one was of a milder character. The results exhibited by the latter show how closely the condition of the urine follows that of the blood. The reason that healthy urine does not present the characters of diabetes consists in the fact, that the amount of sugar which reaches the circulation is small; were Bernard's glycolytic theory correct, the urine of all would be strongly diabetic. From these facts, Dr. Pavy is convinced that the liver is a sugar-destroying gland; its great function, in relation to sugar, being to prevent this principle from reaching the circulation to any material extent. It is surprising that more sugar does not enter the blood, considering the great facility with which the amyloid substance of the liver is transformed into sugar; but it is one of the conditions of health, that such should be the existing state of things. The fault of diabetes essentially lies with the passage of sugar into the blood in opposition to what ought to occur. It is a minimum amount of sugar in the blood which is the character of health, and a larger amount which constitutes disease. The liver exercises a sugar-detaining and a sugar-assimilating function, and this prevents us from becoming diabetic. In fact, the liver is, according to Dr. Pavy, essentially a sugar-assimilating organ, and when its assimilative action is improperly performed, sugar passes into the blood, and becomes excreted in part by the kidneys.

The question before us is one that resolves itself into the utilisation of a certain kind, viz., the carbohydrate kind, of material. In diabetes, this material reaches the blood as sugar, and thence escapes unutilised with the urine, whereas it ought to be utilised in the system. It has been shown that there is but little destruction of sugar in the system; both in carnivora and in herbivora, sugar, contained in arterial blood, reaches the veins without undergoing any material diminution, and hence must circulate through the system over and over again. What

occurs is this. A portion of the sugar ingested reaches the thoracic duct, through the absorbents, and is thence conveyed to the general circulation, accounting in part for what sugar is there found. The main channel, however, for the passage of sugar from the alimentary canal appears to be the blood-vessels, and this is owing to the property of diffusibility which a solution of sugar possesses.

Absorbed into the portal system, it is conveyed to the liver, when it becomes almost entirely, if not entirely, checked in its onward progress, and prevented from entering the general circulation. Evidence points to a direct formation of amyloid substance in the liver from the sugar. This amyloid substance belongs to the class of colloids, and its own diffusibility contributes to its retention in the hepatic cells, where, it is presumed, it undergoes a change which forms one of the links in the series leading up to the final issue—the utilisation of sugar as a force-producing agent in the system.

This amyloid substance is formed not only from sugar, but also from nitrogenous matter, as is clearly proved by the fact that it exists in well-marked quantities in the liver of the animal-feeder kept on strictly lean meat. The nitrogenous compound is split up into urea and a residue, presumably the amyloid matter, in the proportion of 1 to 2, as seen in the following table.

	ALBUMEN.	UREA.	RESIDUE.
Carbon .....	53.50	6.64	44.86
Hydrogen .....	7.00	2.21	4.79
Nitrogen .....	15.50	15.50	—
Oxygen .....	22.00	8.85	13.15
Sulphur .....	1.60	—	1.60
Phosphorus .....	0.40	—	0.40
	100.00	33.20	66.80

Some observations by Dr. Ringer, made in 1860, on the relation between urea and sugar excreted in diabetes, remarkably bear out these analyses, showing, as they do, that on a strictly animal diet, and also during fasting, the eliminated urea and sugar are in the proportion of 1 to 2.2.

The presence of oxygenated blood in the portal system, and blood impregnated with carbonic oxide, both occasion glycosuria, transforming the amyloid substance of the liver into sugar; so that it will be perceived that venous blood is favourable, and oxygenated blood unfavourable, to the accumulation of amyloid matter. As, therefore, there is no organ in the body so freely supplied with venous blood as the liver, so nowhere does amyloid substance exist to a like extent. The liver, during the first portion of foetal life, is free from amyloid substance, and sugar is found in the liquor amnii and fluid of the allantois, because at this period the umbilical vein, containing arterial blood, mainly supplies the liver: this organ presents a state of development out of all proportion to every other part of the organism, being equal to one-half the weight of the whole body. Hence the supply of venous blood from the chylipoietic viscera must be very small, and the oxygenated blood from the umbilical vein would promote the transformation of the amyloid substance into sugar. As foetal life advances, the liver no longer holds the same pre-eminence, and the amount of portal blood becomes greater; and so the amount of amyloid substance accumulates instead of being transformed into sugar. The amyloid substance is not confined to the liver, but is found in varying quantities in the lungs and muscular tissues, especially in a state of rest, and during hibernation. In the solidified lung of pneumonia, amyloid substance

is to be met with to a notable extent; and this is extremely interesting, for the conditions of the blood-supply are the same under the circumstances as with the liver. The lungs, like the liver, receive arterial blood through the bronchial arteries, which may be compared to the hepatic artery, and venous blood through the pulmonary artery, which may be looked upon as holding the same position as the portal vein. In the solidified lung of pneumonia the venous blood of the pulmonary artery will retain its venosity, and stand in the same relation that portal blood does to the liver; so that, with blood supplied through the bronchial arteries and the pulmonary artery, and the lung-tissue solidified, a condition exists identical with that found in the liver, and hence amyloid substance accumulates, which, in the ordinary state of functional activity, is not the case. We may assert, then, that amyloid substance is a body which tends to accumulate in certain animal structures under the influence of a limited supply of oxygen, and that it is owing to the liver occupying the exceptional position it does in relation to venous blood that its special condition, *quoad* amyloid substance, is attributable. If oxygenated or imperfectly de-arterialised blood pass to the liver through the portal vein, the transformation of its amyloid substance into sugar takes place, and glycosuria results. Dr. Pavy states this as an ascertained fact; the *modus operandi* remains to be explained. We know that sugar derived from ingestion, and absorbed from the alimentary canal, becomes converted into amyloid substance; what next occurs is unknown, but it has been sufficiently established that sugar gives origin to fat. In diabetes the assimilation of sugar fails to be carried out; how, is at present uncertain, but Dr. Pavy thinks that a simple passage of sugar through the liver is what occurs. Why the blood should not be sufficiently de-oxygenated, brings us to consider the influence of the nervous system. In 1859 Dr. Pavy published his experiments upon division of the sympathetic filaments ascending from the superior thoracic ganglion to accompany the vertebral artery in its canal, when strongly marked glycosuria resulted. It has long been known that Bernard's puncture induces a hyperæmic state of the chylopoietic viscera. One of the main points insisted upon during these lectures is, that the effect of blood unduly charged with oxygen reaching the liver by the portal vein is to cause glycosuria, a condition at once induced by vaso-motor paralysis of the vessels of the chylopoietic viscera, which follows section of the sympathetic or puncture of the fourth ventricle. This fact constitutes, in Dr. Pavy's opinion, the key to the explanation of the saccharine condition of the urine in diabetes.

The state of the tongue, in aggravated cases, showing as it does a highly hyperæmic condition, lends support to the view that blood is flowing through the system without being properly de-arterialised.

The problem that remains to be solved, is the nature and seat of the lesion of the nervous system that forms the primary morbid condition of diabetes. There being two modes of bringing about vaso-dilatation, viz., by paralysing, as by section, or by an inhibitory action, as when saliva flows at the sight or thought of food, it may happen that diabetes may arise either from a lesion affecting and involving a loss of power in the vaso-motor centres, or a lesion in some part or other of the cerebro-spinal system, leading to an inhibitory influence being exerted upon them. That some textural change in the brain stands at the foundation of diabetes, Dr. Pavy feels

convinced; and his clinical experience has led him to believe that, like locomotor ataxia and progressive muscular atrophy, diabetes is truly a progressive affection.

RICHARD NEALE, M.D.

### MAAS ON INJURIES OF THE KIDNEY.

PROF. H. MAAS of Freiburg, in an elaborate contribution to the *Deutsche Zeitschrift für Chirurgie*, Band x, Heft. 1 and 2, publishes the results of some clinical and experimental investigations on the symptomatology and treatment of subcutaneous wounds of the kidney. The author holds the opinion of the late G. Simon, that the prognosis in cases of injury to the kidney is not so unfavourable as it is supposed to be by the majority of surgical authors. Allusion is made to the view of Simon, that the dangers of hæmorrhage and suppuration in cases of injury to the kidney might be diminished through operative procedure: hæmorrhage by deligation of the renal pedicle and subsequent extirpation of the wounded organ; suppuration by lumbar incision with or without nephrotomy. This view has certainly influenced to some extent the practice of modern German surgeons. Nussbaum recommends an early incision in cases of traumatic renal or perirenal suppuration. Ebstein, whose views as to treatment agree with those of Simon, holds that in cases of renal injury the prognosis is less serious when the wound of the kidney is complicated by wound of the superficial soft parts; for, when the lesion is strictly subcutaneous and there is no external wound, the exit of blood, serous effusion, and pus, is prevented, and the development of pyæmia or septicæmia is consequently favoured.

In the clinical portion of his article, Dr. Maas gives an analysis of 71 cases of injury to the kidney, taken from published and private sources, and tabulated in the following order: 37 cases in which the patients recovered, or in which death was not due to the renal injury; 21 cases in which death was the result of, but did not occur until some time after, the injury; 13 cases in which death speedily resulted, in most instances through injuries to other organs in association with those of the kidney.

Of the subjects of these cases 64 were males and 4 only females; in the remaining 3, the sex had not been mentioned. Of 53 cases in which there is a record of age, in 27 the patients were between twenty and forty years of age. An advanced period of life seems to have no marked influence on the mortality from subcutaneous renal injury, since the table of recoveries included cases in which the respective patients were 52, 66, and 68 years of age. On the other hand, the period of infancy and childhood must be regarded as a condition of danger; for, of seven patients described as children, and who were probably all under 10 years of age, one only, a little girl aged 4 years, recovered, all the others having succumbed very soon after the injury.

In 53 of the 71 cases the injury of the kidney had been caused through direct violence, acting in all but three of those cases on the front or side of the trunk. In 12 cases the injury had been the result of indirect violence, the patients having fallen from a considerable height or with much violence on to a smooth and level surface, or one free from any prominent object that might have caused directly any laceration or contusion of the kidney. In six cases, no mention is made of the manner in which the injury had been caused.



In a large majority of the cases in which death had occurred soon after the injury, the renal structure with the fibrous capsule was found torn in various directions, but most frequently in the transverse axis of the organ. In severe injuries of the kidney, more or less of the renal structure is often broken down to a soft mass of detritus, and the whole of the injured organ suffused with blood. The proper capsule is occasionally distended with effused blood, so as to form a very tense and elastic tumour. The fatty capsule and surrounding connective tissue are saturated with blood, the retroperitoneal effusion of which often reaches as far downwards as the pelvis, and upwards as far as the lower margin of the scapula. Blood is very frequently effused into the renal pelvis, and thence passes along the urethra into the bladder, where it is usually dissolved in the urine, and is seldom found in clots. In three cases only in the tables had there been any demonstration of the presence of coagulated blood in the bladder. The direction of a contused or lacerated wound in the kidney very rarely corresponds with that of the long axis of this organ. The lacerated wounds nearly always pass from side to side, and frequently cut off a portion of the organ which is retained in connection with the main portion by means only of unbroken capsule. In a few very severe and fatal cases from forcible direct violence, the peritoneal covering of the kidney had been torn through, and much blood effused into the abdominal cavity.

Death from injury to the kidney is seldom due to primary hæmorrhage. In 6 only out of the 71 tabulated cases had the bleeding been so excessive as to cause early death, and in 3 of these there had been laceration of the peritoneal covering of the injured kidney, and considerable intraperitoneal hæmorrhage. Secondary hæmorrhage is put down as the cause of death in four instances: in two of these cases orifices imperfectly closed by thrombi were found in large branches of the renal artery, and in one the injured kidney, which was enormously enlarged, was partly made up of a large arterial hæmatoma lined with clot, opening into which was a large branch of the renal artery. In six instances death had resulted from decomposition, with consequent suppuration, of the blood effused around or within the injured kidney.

In very many of the fatal cases death had been due rather to serious complications than to the injury of the kidney. In 2 cases both kidneys were found lacerated, and in two other instances the injured kidney was a single renal organ, the other having been entirely absent. In 4 cases there had been simultaneous laceration of the spleen, and in two of those fracture of some ribs. In 2 cases both liver and spleen had been crushed, and in several instances there had been fractures of ribs and of the bones of one or more limbs. In single cases of renal injury mention is made in the tables of pyothorax, pulmonary abscess, rupture of bladder, dislocation of the first cervical vertebra, and laceration of the leg necessitating amputation.

Dr. Maas refers to some cases in his tables which throw light on the nature of the healing process after wounds of the kidney. The first observation, one of much interest, was made by von Recklinghausen, and related to a case of complicated injury which proved fatal on the eighth day. The renal wound was found occupied by a completely discoloured and tough thrombus. That the ultimate stage of healing consists in the formation of a scar of connective tis-

sue, is proved by a case recorded by G. Simon. The patient died from tuberculosis five years after a severe renal injury. A well-marked cicatrix was found, containing small and relatively thin-walled vessels. A case in which the healing process had been perfected before death has also been reported by Timothy Holmes. The patient died eighteen months after the injury, probably from long-standing granular atrophy of the kidneys. The trace of the rupture in the injured kidney could hardly be seen, though the remains of extravasated blood in the organ and under its capsule were still visible. In another case, in which the patient died twenty years after an injury to the kidney, followed by an external abscess, the injured organ was found to have been converted into a small cyst, which contained a mulberry calculus.

The most frequent, though not a constant, symptom of crushing or laceration of the kidney, is shock. By the results of experiments on animals, and by the clinical fact that this condition has not been observed in some cases of serious injury to the kidney, the author has been led to believe that this shock is the result not of the renal injury, but really of general abdominal contusion. The most constant symptom of injury to the kidney is pain in the region of the organ. This is increased very much on pressure in the corresponding lumbar region. It is usually restricted to the injured organ, and to the parts just around it, and rarely assumes the radiating character of the so-called renal colic. This symptom is often very persistent, remaining after all other symptoms have disappeared, and troubling the patient long after apparent convalescence.

In all but 6 of the 71 cases hæmaturia was observed. In some cases there was slight staining of the urine, in others a discharge of several pints of blood. In almost every instance of hæmaturia renalis, the blood was dissolved in the urine, and not passed in clots. In some cases there was temporary retention of urine, which, however, would always be readily relieved by the introduction of a catheter. The hæmaturia persisted for a variable period within a limit of eighteen days. A long duration of the bleeding may be explained by a gradual separation and dissolution in the urine of clots arrested in the renal pelvis and canaliculi, after the arrest of the primary hæmorrhage. In some cases, relapsing hæmaturia was observed. This can be accounted for only by secondary hæmorrhage from the lacerated vessels. Hæmaturia frequently recurs if the patient be allowed to move about too soon after the injury.

Fever is a frequent symptom, even in cases where there is no renal or perinephritic suppuration. Dr. Maas attributes this to the fact that in severe injuries to the kidney, as in fractures and in other subcutaneous injuries, there is always considerable inflammatory exudation, which, as the patient recovers, becomes absorbed. For this condition, Volkmann has proposed the term of aseptic fever.

Anuria being an indication of functional impairment of both kidneys, is a very serious and almost invariably fatal symptom in cases of renal injury. It was observed in the two cases in which the injured kidney was a single organ.

Although in a large majority of the cases which terminate favourably the healing process is completed by the end of the fourth week, and the patients are then quite well, there are some occasional results of renal injury which, though not incompatible with recovery, constitute really serious

inflammatory conditions. These are non-suppurative nephritis, perinephritic suppuration, and renal abscess. Formation of calculus, according to the list of tabulated cases, is not a frequent result of renal injury, having been noted in three instances only.

The prognosis of subcutaneous injury of the kidney is placed in a more favourable light by those collected cases, than by the general statements of most surgical authors. We find that of 71 cases 37, more than half, terminated in recovery. The proportion will appear more favourable if we consider the causes of death in the 34 fatal cases. In one case death is attributed by Dr. Maas to the treatment, which consisted in excessive venesection; in 14 cases the injury to the kidney was complicated by fatal injuries of other organs; in 2 cases the injured kidney was a single organ, and in one case both kidneys were injured. Of 70 cases, therefore, of unilateral injury of the kidney, there were 15 cases only in which the renal injury could be fairly regarded as the cause of death. In 6 of these cases death was due to primary hæmorrhage, in 4 to secondary hæmorrhage, in one to simultaneous secondary hæmorrhage and suppurative decomposition of perirenal effusion of blood, and in 3 cases to the latter condition alone. Three patients died in consequence of renal abscess.

Dr. Maas recommends as the best treatment rest in bed, perfect quietude, and the application of ice-bags. Whilst the administration of tannin, ergotine, and the like astringents, has very problematic results in cases of dangerous bleeding from the large vessels, there are no indications for the use of these agents for minor hæmorrhages. The persistent presence of blood in small quantities in the urine is usually the consequence of the dissolution of coagula formed at the time of the primary bleeding. The administration of drinks charged with carbonic acid is recommended. By such agents the secretion of urine is excited, and the dissolution of coagula favoured.

In discussing the question whether severe hæmorrhage from subcutaneous injury of the kidney could be arrested by any operative proceeding for deligation of the open vessel, and extirpation of the wounded organ, Dr. Maas points out in the first place that profuse bleeding from large branches of the renal artery is often spontaneously arrested through the formation of a large clot. There is an important distinction, it is shown, between this subcutaneous hæmorrhage and the bleeding from large open wounds, and into an extensive cavity such as the abdomen. In many cases, the kidney is so much broken up that it would be difficult to find the bleeding vessel and to remove the injured organ. It would not be easy to decide as to the indications for this plan of treatment. Shock is an uncertain symptom of severe injury to the kidney, and hæmorrhage, even though very profuse, is not always fatal.

The tabulated cases show very decidedly the advisability of making a lumbar incision when the renal injury has resulted in suppuration either around or within the injured kidney. Dr. Maas holds that in every instance in which fever is observed, and a tumour can be made out in the lumbar region, this tumour should be punctured, aspirated, or, if necessary, freely incised. If, after some interval from the date of the injury, pus be found in the urine, the kidney should be exposed, and either a free passage

be maintained for the discharge of pus, or the injured organ be extirpated.

W. JOHNSON SMITH.

## A CASE OF CONGENITAL NARROWING OF THE ENTIRE AORTIC SYSTEM, WITH CONSECUTIVE GREAT HYPERTROPHY OF THE HEART.

BY DR. KNOEVENAGEL, of Cologne.\*

THIS case appears of interest, first, because of the in many respects peculiar symptoms presented; also on account of the uncertainty of the diagnosis, and, lastly, with respect to its etiology.

The patient, aged 21, came to the hospital on April 6th, after having been under medical treatment outside since March 25th. His chief complaints were of dyspnœa and repeated vomiting, with irregular bowels; and he said that for a year previously, after prolonged labour in the vineyard (he was a vine-dresser), he had occasionally suffered from shortness of breath and palpitation. In the harvest-time of 1876 he had an attack of tonsillitis, but it could not be ascertained whether it was diphtheritic. He had not observed difficulty of swallowing, frequent hoarseness, or rheumatic pains in the arms. On April 7th he had a pale bloated countenance, with a very strongly built and well nourished body. The most striking symptom was the remarkable smallness of the pulse, the right being not at all, and the left scarcely to be felt; its frequency could not be estimated. The percussion-note over the lower part of the sternum was dull; towards the left, there was diminished dullness as far as the anterior axillary line. The apex-beat was not to be felt; diffuse vibration was felt quite to the outside of the nipple, which was rather higher on the left than the right side. The heart's action was remarkably irregular; there was no valvular murmur; systole and diastole were difficult to discriminate; sometimes the sounds appeared rough, especially to the left of the sternum, much like pericardial friction-sound. The number of cardiac contractions appeared to be greater than the number of the pulse—very imperfectly perceptible—in the femoral arteries. The irregularity of the heart's action could be perceived by palpation. The carotid pulse on both sides was vibrating, not to be counted; with it could be heard very frequent, short, deep sounds. In the left lung, posteriorly at the lower part, were moist *râles* with feeble breathing; there was dullness nowhere, and marked mobility of the pulmonary border. The spleen could be felt only imperfectly; its dullness appeared increased, as did also that of the liver. The temperature was subnormal: morning, 36° Cent. (96·8 Fahr.) evening 36·5 Cent. (97·7 Fahr.). The patient made subjective complaints, chiefly of shortness of breath in walking and going up stairs, which had for the last three weeks been more marked.

April 8th.—Temperature, morning, 36·3 Cent. (97·5 Fahr.), evening, 36·7 Cent. (98·1 Fahr.). The face was even more bloated; the pulse not perceptible. Auscultation gave 140 heart-beats per minute. He had a quite normal stool. The urine was very scanty, estimated at 350 to 400 cubic centimètres; sp. gr. 1031, it was acid, with a copious deposit of

\* *Berliner Klin. Wochenschrift*, Sept. 1878.



urates; no albumen, no sugar. A large blister was applied to the cardiac area; infusion of digitalis (only weak), with quinine, was ordered; also ethereal tincture of valerian.

April 9th.—There was strong bulging of the epigastrium, between the xiphoid cartilage and the navel; the entire part felt very resistant, and gave a very dull note, which was limited below by a convex border. The limits, as defined by percussion, could also be confirmed by palpation. Half an hour after swallowing milk, wine, etc., as a rule, there was copious vomiting. He had three scanty stools. The urine was as on the previous day. The heart-beats were 160; over the femorals only an irregular vibration could be felt. The patient lay on his back by preference. Microscopical examination of the blood showed nothing special, no increase of the white corpuscles.

April 10th.—There were marked cyanosis of the lips, severe oedema of the feet and legs, undulating movements of the prominence in the epigastrium, which could be felt by palpation. The cardiac vibrations were always most decided to the outer side of the left nipple. To-day the pulse in the femoral artery could be counted, about 160. He had had less vomiting since less food had been taken at one time. The urine was only a little less scanty. There was some muco-purulent expectoration. The patient was often in the knee-and-elbow position, because he breathed more easily. The pulse was not more easily felt. In the night he was much purged, with frequent passage of wind. The abdomen became softer and flatter; the liver, with a smooth upper surface, could be felt, in the mammillary line  $1\frac{1}{4}$  to  $1\frac{1}{2}$  inch, in the parasternal line about 3 inches, under the costal border; in the middle line about 5 inches under the base of the xiphoid process. He had vomiting at morning and noon of the following day. The heart's contractions were 140, intermittent. The temperature morning and evening was 36.8 Cent. (98.4 Fahr.). The patient felt himself easier; on the right posteriorly from the ninth dorsal vertebra downwards, there was moderate dulness, and no mobility of the lower border of the lung.

April 13.—Temperature, morning, 37.5 Cent.; evening, 36.4 Cent. He had six thin pultaceous stools. The quantity of urine commenced to increase, about 800 to 900 cubic centimètres. The heart's contractions were 144 to the minute.

April 15th.—There was much more urine, about 2,500 cubic centimètres of sp. gr. 1.008; whether as the consequence of the recently ordered turpentine fomentations, was doubtful. He also had some copious stools, each very different in colour and in the quantity of bile present. The patient felt easier after these evacuations. Temperature, morning, 36.8; evening, 37.5 Cent. The pulse in the femoral arteries began to be countable, with great attention, at from 180 to 190, and corresponded approximately to the heart's contractions.

April 16th.—The quantity of urine was no longer so great, still about 1,600 cubic centimètres. Temperature, morning, 36.9 Cent.; evening, 37.5. He had very frequent calls to stool, with tenesmus; the matter passed contained much admixture of mucus. The latter continued also the following day; the next night he vomited once more, not having done so for six days.

April 18th.—The temperature was subnormal; morning, 36.2 Cent.; evening, 36.8. The quantity of urine was diminished; the heart's contractions were 144; he lay in the knee-and-elbow position.

April 19th.—At last the effect of the digitalis seemed to be produced; the heart-beats were 120, the slowest which had been observed hitherto.

April 20th.—The heart-beats were 140, very irregular; there was greater dulness both to right and left; very marked undulation of the whole epigastrium. Temperature, in the morning, 36.0 Cent., the lowest observed. The intestinal irritation had disappeared. Respiration was always 32 to 36. From this time the principal phenomena (enormous frequency of the heart, subnormal temperature, pulselessness, small quantity of urine, dyspnoea), remained unchanged till death.

On April 25th, he again vomited twice. On the 26th he had great tenesmus. The epigastric pulsation varied from day to day in extent and force. Another examination of the blood showed no increase of leucocytes. The quantity of urine diminished again to 700, 600, 500, and 400 cubic centimètres. Moreover, it contained a large amount of albumen, from which it had previously been quite free. On the knees, from the position in which he remained, red infiltrated places and numerous pustular eruptions formed. To produce diuresis, he was given juniper tea with cream of tartar, and benzoated tincture of opium for the expectoration; the digitalis was stopped some time ago as useless. The very distressing condition of the patient was exaggerated towards the end of April by urgent pains, which radiated from the epigastrium to the region of the manubrium sterni, and extended thence over the chest. Vomiting occurred only occasionally. The temperature was, as always, subnormal; respiration 40 to 44, and before death reaching 52, without becoming stertorous. From May 2nd there were rust-coloured masses in the sputa, without physical signs of anything but catarrh, and no decided dulness over the lower part of the thorax. Mustard poultices, blisters, and Dover's powder gave no relief. On May 3rd, violent urgent pains began in the loins, which radiated on both sides, and were followed by great dyspnoea, cyanosis, and profuse sweating, inability to swallow, but still complete consciousness. Death occurred in the night between the 6th and 7th of May.

The following symptoms are of chief interest.

1. The excessive action of the heart, and the friction-murmur.

2. The choice of the knee-elbow position for even the whole night long.

3. The periodical greater and less tumour-like prominence of the præcordia.

As to the first, we must think that the heart must act more slowly under the laborious process of overcoming the increased resistance of a diminished diameter of the aortic system (as the necropsy afterwards showed), just as it characteristically does in stenosis of the aortic orifice. For explanation there remains, as the phenomena of paralysis of the vagus throughout were absent, only irritation of the sympathetic, upon which indirectly the subnormal temperature and the imperceptible pulse must have depended. It is interesting also to observe how much the heart can stand without death occurring, if the valves and muscular substance remain intact. The occasional rough character of the heart's sounds, like pericardial friction, is also noteworthy, as *post mortem* no appearance of pericarditis was found. Probably there was merely a rubbing of the heart against the parietal pericardium, which Seitz has offered as an explanation of similar cases in his *Lectures on Heart-Strain (Zur Lehre von der Ueber-*

*austrengung des Herzens*). On the second point, the knee-and-elbow position, this appears to me as a by no means inexplicable, and therefore rightly noteworthy symptom. The patient instinctively sought to relieve himself of a load close above or below the diaphragm; of whatever kind, speaking generally, the tumour was, this position of the body must have relieved the lungs and great vessels, and so rendered circulation and respiration more easy. What part the position of the head in consequence of this position of the body may have had upon the arterial flow to the brain, remains undecided. Without doubt, however, the knee-and-elbow position was the cause of the localisation of the œdema anteriorly between the epigastrium and larynx and the two nipple lines, while the other parts of the trunk and the extremities remained free.

On the third point: the tumour-like swelling of the præcordia, apart from the œdema of the skin in the neighbourhood, seemed to be partly a periodical swelling and contracting of the liver (corresponding with the greater or less cyanosis), partly distension of the stomach, which latter view was confirmed by the flattening that took place after copious vomiting and purging. The vomiting itself appeared to me not to be explained by a nervous origin (*vagus?*), nor from chronic catarrh—the patient had a relatively good appetite to the end; I believe it depended simply on want of space for the stomach, a view which was supported by the fact that the more frequent ingestion of smaller quantities put a stop to it.

The second and third points concern principally the uncertainty of the diagnosis.

Although the discovery of a much enlarged area of cardiac dulness, and the functional derangement, made the idea of fatty heart at first sight plausible, this view soon receded into the back-ground. The position of the patient, the limited œdema around the sternum (obstruction to superficial and internal mammary veins), the epigastric tumour, and vomiting after filling the stomach, all pointed to something encroaching upon the stomach, either in the anterior mediastinum, or close under the diaphragm in the abdominal cavity, such as a tumour, which at the same time pushed the heart to the left, involved the lumina of the great vessels, and influenced the sympathetic plexus. This might be due to a hydatid tumour on the convexity of the liver, the more so as the tenesmus, the mucus in the stools, and the difference in their colour, directed attention to the liver and intestine. But nothing certain could be made out from the stools, and later on important information was accidentally obtained from his relatives. This pointed with certainty to congenital, probably hereditary affection. Then succeeded the view that the mass was an aneurism, in spite of the absence of physical signs, and the want of any history of pain before the appearance of the severer symptoms. A foetal stenosis of the aorta at the orifice of Botalli's duct must be discarded, as the characteristic sign of enlargement of the peripheral arteries was absent, and it would not explain why the pulses in both radials should be imperceptible.

A third interesting point lay in the etiological relationship. It could not be doubted that the condition was hereditary; the relations said that beside one uncle, who had suffered long from hydrothorax and died after thoracotomy (no necropsy made), there was another uncle (father's brother) who could neither sit nor lie on his back, but could only rest in

a bent-forward position, leaning his breast upon something. He died suddenly after eleven days' illness. Nothing further could be ascertained, but it was natural to suppose that the same abnormality of our patient existed in that uncle. The brothers and sisters of the former were healthy. Contrary to all our expectations (a certain diagnosis was not, however, made), the autopsy, which was made with great good will and care by Dr. Barthold, showed narrowing of the whole aortic system and great hypertrophy of the heart. The report of the necropsy given by Dr. Barthold forms the conclusion of this paper, and I have only to add that at the *post mortem* examination a moderate sized goitre was found hidden by the œdema, below the larynx. Although exophthalmos was absent, yet the coincidence of a goitre with functional anomaly of the heart brings the case nearer to one of Basedow's disease, and it is worth enquiring whether in marked cases of that disease any abnormality in the lumen of the aortic system has often been observed.

POST MORTEM report by Dr. Barthold. The body was medium sized, ill developed. The skin of the face was very œdematous, also the anterior surface of the trunk and neck. The œdema was most marked around the clavicles. Over the patellæ were superficial bed-sores. The muscles were badly developed and pale. The belly was distended, the intestines protruding when the cavity was opened. In the peritoneal cavity were about 150 grammes of clear yellow fluid; the colour and position of the intestines were normal. The lower margin of the liver reached below the costal border  $1\frac{1}{2}$  to 2 inches in the nipple line, 2.4 inches in the parasternal line, and  $4\frac{1}{2}$  inches below the base of the xiphoid process. The convex upper surface of the liver was quite free. The position of the diaphragm reached on the right the eighth and on the left the seventh intercostal spaces. In both pleural cavities were about  $2\frac{1}{2}$  litres of clear yellow fluid, so that the lungs were pressed back against their roots. About 200 grammes of clear fluid were found in the pericardium. The heart was greatly enlarged, principally upon the right side, and lay with its apex in the sixth intercostal space, 4 centimètres outside the nipple line. The heart measured in its longest diameter (from the origin of the great vessels to the apex) 7.4 inches, in cross diameter 4.8 inches; of the longest diameter the right ventricle anteriorly measured 5.2 inches, and it formed the whole of the transverse diameter anteriorly. The heart lay completely free upon the spine and the aorta, and was only supported a little laterally by the left lung. The greater part of the left ventricle lay posteriorly, whilst the right ventricle occupied the anterior half. All the cavities of the heart were tensely filled; in the right auricle was much fluid blood, with little clot, the same in the right ventricle; in the left pulmonary veins was a buff-coloured, in the left ventricle much old clot. The heart's cavities on the right side were much dilated; the muscular coat was not thickened. The muscle was pale red; the valvular apparatus was intact on both sides. The cavity of the left ventricle was much dilated, and at a place near the apex in the septum there was an area about 1.2 inches in extent where the wall was thinned and fibroid, and had yielded so as to form a depression; elsewhere the wall was about an inch thick. The trabeculæ were generally flat, especially near the depressed part; and there were clots between and under them, the upper parts of which were brownish black and regular, the deeper parts dirty grey brown, and with



fibrous eroded surfaces, and were very brittle. On the endocardium covering the papillary muscles there were many stellate yellow-coloured appearances, but the muscular substance itself was everywhere equally pale, and nowhere yellow. Microscopical examination of the heart's muscle was not made. The valvular apparatus was very delicate and unchanged. Nothing abnormal was found in the course of the aorta, but it was itself very narrow, scarcely admitting the finger even at its commencement. It measured at the level of the valves 2.4 inches, at the ductus Botalli 1.6 inches, the same at the origin of the left subclavian, at the origin of the fourth intercostal artery 0.9 inch, and the branches of the aorta also showed the same; for instance, the right and left carotids measured 1.2 inches, their origins 0.72 inch, the femorals at Poupart's ligament 0.56 inch, the radials 0.24 to 0.28 inch. The aorta was, however, very little elastic; its coats and those of all the vessels were very thin. Both lungs were very heavy, with superficial colouring of bluish grey, in the anterior parts containing air. On section they were smooth; on pressure, much mucous fluid poured out. In the right upper lobe was a radiating thick pleural scar containing a calcareous encysted mass. The mucous membrane of the air-passages was cyanotic; in the trachea particularly there were quite superficial punctiform hæmorrhages; in the tonsils were cicatricial thickenings. The thyroid body was enlarged on both sides; on section much blood poured out of the dilated veins; the tissue appeared throughout glandular and lobulated. The spleen was adherent partially to the diaphragm; it was 3.75 inches long, 3 inches broad, and 1.2 inches thick; it felt thick, and contained blood in moderate quantity. Both kidneys were of ordinary size, purplish colour, and very hard consistence; the medullary cones contrasted by their colour with the cortical substance. The suprarenal capsules and genital organs showed no changes. In the stomach were five round worms and much mucus. The liver on its upper surface and on section presented a pronounced nutmeg appearance, the bluish black centres of the acini contrasting with their greyish yellow peripheries. The mesenteric glands were only slightly enlarged. In the ileum were several submucous echymoses of the size of lentils. The brain showed only œdema of the arachnoid. The examination of the blood gave, as during life, nothing special.

ROBERT SAUNDBY, M.D.

#### BORODULIN ON MIXED FORMS OF TYPHUS.

M. BORODULIN contributes to the *St. Petersburger Medicinische Wochenschrift*, for July 15th, some observations on the concurrence of different types of fever founded on cases which occurred in the clinique of Prof. Botkin of St. Petersburg. The simultaneous invasion and course of several forms of fever in the same individual are at the present day by no means generally acknowledged, some regarding the occurrence of these mixed forms as beyond all doubt, while others as stoutly deny it. But after the late epidemic of relapsing fever in St. Petersburg, the possibility of relapsing being superadded to other forms of typhus fever was admitted in the clinique of Dr. Botkin. Clinical observation showed marked peculiarities in the course of abdominal and exanthematic typhus, which pointed to relapsing fever, such as oscillations of temperature, sweats, only

slight typhoid impairment of the sensorium, clinically well marked alterations in the liver and spleen, primary brick-red petechiæ occurring at the very commencement of abdominal or exanthematic typhus. During the epidemic of the present year, the blood of all the typhus patients in the clinique was examined with a view to ascertaining whether it contained spirillæ, whose presence has hitherto been regarded as pathognomonic of relapsing fever. They were found in four cases of a mixed form of abdominal typhus and in one of exanthematic typhus. That spirillæ were not found in the blood of the other cases, may be due partly to want of time for a minute examination and to the difficulty of finding them; since their quantity is in direct proportion to the amount of the specific blood-poison of relapsing fever, for the nearer the disease approaches to true relapsing fever the greater the number of spirillæ, and *vice versa*. The following is an abstract of the five cases alluded to.

CASE I.—P., aged 19 years, was received into the clinique on the fourth day of the disease. The commencement of the illness was gradual, without rigors. Even on the evening of the third day the temperature was 104.7 F., the next morning 104 F., and in the evening again 104.7. His general strength was still excellent; the sensorium was clear; there were a few petechiæ and rose spots; the spleen and liver were considerably enlarged and tender; the heart was somewhat enlarged transversely. He had slight icterus. There were traces of albumen in the urine. He had slight delirium on the night of the fourth day. On the fifth day a few spirillæ were found in the blood. On the sixth day, besides nocturnal delirium, there was also impaired intellect during the day, which, though slight to the twenty-fifth day, thereafter increased considerably, and continued so till death. On the eighth day, he had bronchial catarrh. On the nineteenth there was right-sided hypostatic pneumonia, extending to both lungs on the twenty-third day. The amount of albumen in the urine increased gradually; cylindrical casts were found, and the albumen only diminished towards the end of the disease. The temperature ranged from the fourth to the twentieth day between 102.2 F. (only once) and 104.9 F. In the night of the fifteenth to the sixteenth day he had a severe rigor; and on the following morning spirillæ were again present in the blood. In the night, from the nineteenth to the twentieth day, he had again rigors, with subsequent sweating and reduction of the temperature from 104 F. to 100.4 F. On the morning of the thirty-first day, the temperature fell after profuse sweating from 105.2 to 98.8 F. From the thirtieth day, the impairment of the sensorium increased considerably. There was subsultus tendinum. On the thirty-third day there was suppression of urine, with extreme weakness, ending in death on the thirty-sixth day.

*Necropsy.*—There were œdema of brain-substance, hypostatic pneumonia in both lower lobes, and lateral dilatation of the heart, with flaccid walls of a greyish yellow colour; the valves were normal. The spleen was much enlarged; its parenchyma was anæmic, firm; near the surface was a recent blood-clot. The liver was also much enlarged; its parenchyma was of a greyish yellow colour, indistinctly marked. The right kidney was enlarged; the capsule was loosely adherent; the cortical substance was expanded, grey, friable, with small puriform dots; the calyces were dilated; from the pyramids an opaque fluid could be expressed. The left kidney

was similarly altered, with the exception of the puriform dots. In the ileum were several ulcers reaching to the muscular coat, and corresponding with Peyer's patches. The mucous membrane of the stomach was pale, with small extravasations.

CASE II.—S., aged 19, was received on the ninth day. The invasion of the disease was gradual, so that the patient, a student, attended lectures on the sixth day. On the seventh and eighth days he had nocturnal sweating. The liver and spleen were much enlarged, and tender. There were some petechiæ and rose-spots. The sensorium was free; a few spirillæ were found in the blood; there was no albumen in the urine. Otherwise the case presented nothing unusual. The temperature became normal on the twenty-fifth day; the liver and spleen remained enlarged till the thirty-sixth day.

CASE III.—M., aged 21, female, was admitted on the 6th day. She fell ill suddenly. On the first day there was great heat of surface, without preceding rigors, and headache. On the fourth day the morning temperature was 102.9 Fahr.; and evening temperature 104 Fahr. In this case also were found primary petechiæ and rose-spots on the abdomen. The liver and spleen were not so much enlarged as in Case 2. These and the laterally somewhat enlarged heart were tender on percussion. On the seventh day, some spirillæ were discovered in the blood. There was slight tendency to sweating; the temperature was that of abdominal typhus.

The next two cases present more symptoms of relapsing fever, and spirillæ were found in increased numbers.

CASE IV.—E., a student, was received on the sixth day of the disease. The commencement of the disease was gradual, without distinct shivering. The morning temperature was 103.9 F.; evening, 104.7 F. The liver and spleen were moderately enlarged; he had slight roseola, and bronchitis; the sensorium was slightly clouded. On the seventh day there was an increase of eruption, and of mental impairment, with diarrhœa; there were no spirillæ in the blood. Up to the ninth day the temperature ranged between 103.1 and 104.9 F.; on the morning of that day it stood at 104.9, but now declined after copious sweating to 96.8 F. by 3 p.m., and rose again in the evening to 104 F. On the tenth day the eruption vanished almost entirely, but the senses became more and more clouded till the fifteenth day. On the fourteenth, fluctuation became perceptible in the lower abdomen, and the diarrhœa ceased. Up till the sixteenth day the temperature gradually sank in 48 hours to 97.3 F. He had daily sweats from the fourteenth to the nineteenth day. The low temperature continued about 48 hours; for on the evening of the seventeenth day it again rose from 96.1 in the morning to 101.6 F. During the following two days the temperature continued of the same remittent character, 99.3-103.1; 99.1-103.6 F. On the nineteenth day the patient began to shiver, and the spleen became enlarged. On the twentieth day the temperature was, in the morning, 101.3, in the evening 104.9, with severe rigors. Numerous spirillæ were now found in the blood; on the next (twenty-first) day he again had rigors, with spirillæ in the blood; in the evening, sweating, with fall of temperature to 97.9. On the twenty-second day the morning temperature was 99.5, rising after a rigor to 106.3 F. From this day to the twenty-seventh day there was increased temperature every evening, with almost normal morning temperature. Indeed, on the twenty-fourth day, both morning and evening tem-

perature was normal. But from the twenty-seventh to the thirtieth day there were high temperatures both morning and evening. After this the temperature rose only once to 100.4 F., and then declined to about 98.6, until the dismissal of the patient. This case is therefore evidently of a mixed character. Against a pure relapsing fever are the gradual beginning of the disease, the typhoid condition, continuing to the fifteenth day, the marked rosy eruption, and the absence of petechiæ. It also differs from pure exanthematic typhus in the decline of the temperature on the ninth day to 96.8, after sweating, followed by a rise on the same evening; also in the spirillæ found in the blood during a paroxysm of high temperature lasting five days; and, lastly, in a third rise of temperature after a remission of 24 hours, and a continuance of high temperature from the twenty-fifth to the twenty-ninth day, on which latter day it attained its maximum, after which it rapidly declined.

CASE V.—G., aged 23, sister of charity, was admitted on the fifth day of the disease. This began with severe rigors, as in true intermittent. On the evening of the day of admission, the temperature was 104.0. The liver and spleen were enlarged with considerable jaundice; primary petechiæ were present. The next morning large numbers of spirillæ were found in the blood. In the night from the seventh to the eighth day there was a critical decline of temperature from 104 to 99.2 F., after profuse sweating, but in the evening it had again risen to 100 F., and now continued on the average somewhat above the normal. On the sixteenth day there was again severe shivering, and considerable numbers of spirillæ were found in the blood. This paroxysm continued four days, and was then followed by copious sweating, and a rapid decline of temperature from 104.5 to 98.6 F. The temperature now continued normal for two days and a half, when it again rose, assuming a remittent character with morning remissions and evening exacerbations, until the twenty-ninth day of the disease. On this day temperature fell, after sweating, to 98.6 F., and continued normal thereafter. This case differs from the usual course of true relapsing fever in the continuance of pyrexia between the first and second attacks, and in the somewhat long period with relapsing fever after the crisis of the second attack, when the course of the temperature somewhat resembled that of abdominal typhus.

W. J. TREUTLER, M.B.

#### SNELL ON THE CURATIVE INFLUENCE OF MANIA OVER CERTAIN OTHER DISEASES.

A PAPER on this subject by Dr. Snell is published in the *Allg. Zeitschrift für Psychiatrie*, Band xxxv, Heft 4. The author commences by reporting the following case. Marie S., admitted in 1874 at the Hildesheim Asylum, aged 62, had had fourteen maniacal attacks in the previous twenty years; the intervals between them had latterly become much shorter than previously. After admission, the attacks occurred at least twice in each year. In February 1877, after a slight attack of excitement had passed off, the patient became jaundiced; during several months the icterus continued to increase; the liver was decidedly enlarged; œdema of the feet supervened, and was soon followed by general anasarca of the whole body, including the



face; serous effusion also took place into the pleural and peritoneal cavities, the jaundice remaining unchanged. In June, the dropsy had become so excessive that the patient could hardly move, and was constantly propped up in bed on account of dyspnoea; the urinary secretion was very scanty, and the appetite so slight, that only small quantities of fluid nourishment were taken. While in this apparently hopeless condition, the patient became, on June 12th, maniacally excited; a cheerful expression returned to her countenance, and her weak voice became strong and ringing; urine was secreted in large quantity, and appetite daily increased; the dropsical effusions were gradually absorbed, and in about three months both dropsy and jaundice had entirely disappeared. Six months later, there had been no return of either; but the patient had had three further attacks of mania, each of which evidently exerted a favourable stimulating influence upon her otherwise weak and failing health.

The author proceeds to observe that the great curative power of mania, as exemplified in the above case, is by no means a rarity; he has frequently observed its favourable influence. The diseases specially mentioned as most likely to be benefited by a maniacal attack, are the early stages of phthisis, chronic liver affections, gout, rheumatism, disturbances of digestion, and nervous complaints which are of a hypochondriacal, hysterical or neuralgic nature. Dr. Snell has seen all these morbid affections, during and after mania, improve or entirely disappear, either temporarily or permanently.

It must have been remarked by many that, at the commencement of an attack of mania, patients previously pampered and delicate, who did not dare expose themselves to the air, and were at the greatest pains not to eat anything except the most easily digestible foods, now suddenly bid defiance to cold and indigestion; they leave their beds with naked feet and no wraps; they also swallow almost anything that comes before them; and neither of these procedures has any harmful effect upon their health or comfort. It often appears as if the mania had called forth a new body with new powers, new requirements, and new capacities of resistance; respiration becomes stronger, the digestive organs develop increased activity, and the voluntary muscles are capable of the greatest exertion without becoming exhausted. All the secreting organs are stimulated, but the necessity for sleep is diminished. It is not difficult to see how, under the influence of this new activity throughout the whole organism, exudations which, in many chronic affections, lie at the root of the diseased condition, become absorbed. It is to this action that the curative effect of conditions of excitement is chiefly due.

The author and others had previously considered that the increased muscular activity and consequent improvement in respiration sufficiently explained the beneficial influence of mania upon physical disease. It is well known that the want of suitable muscular exercise is a fruitful source of chronic diseases, for which the supply of this want is the best cure. In Germany, the compulsory military service is said to have the most beneficial effect upon the health and *physique* of those who had otherwise, owing to the one-sided system of education in vogue, become weak and sickly. The value of bodily exercise and exertion for the improvement and preservation of health has been well known from the most ancient times. The case is mentioned of a city man, of middle age, who, in consequence of

affections of the liver and digestion, had become hypochondriac; his physician quoted to him the advice of Mephistopheles to Faust, to go out into the fields and commence hoeing and digging, without entertaining any idea that it would be followed. The result was, however, that the patient gave up his prosperous business, bought a small property in the country, and worked daily, from morning till night as an ordinary labourer. He is now a healthy, happy man, and has attained to a good age. Further evidence in favour of this most natural of all methods of cure is furnished by the excellent results lately obtained in the treatment of commencing phthisis by bodily exercise in mountain air.

From the above considerations, it is evident that the increased muscular activity which is caused in mania by the abnormally excited condition of the nervous system may give rise to considerable changes in the organism; but the case with which this paper commences is sufficient to show that muscular activity is not the only cause of the beneficial action of maniacal excitement. In this case, hardly any movement of the voluntary muscles was at first possible, owing to the excessive dropsical swelling of the limbs; it was not until the greater part of the dropsical fluid had been got rid of that movements became practicable. For the same reasons, the functions of respiration could only very gradually be more thoroughly performed, as the effused fluid did not allow of any suddenly increased activity. The conclusion, then, is unavoidable that, in addition to increase of muscular and respiratory action, other factors are at work in mania, able to cause in the system changes which lead to the removal of certain morbid conditions. These factors must be sought in the augmented energy of nerve-function. In the same way as this nervous energy stimulates ideation and calls forth unusual strength in the muscular system, must we suppose that it exerts its influence upon those more obscure regions of the human organism which are withdrawn from the sphere of will and consciousness.

In a discussion which followed the reading of this paper before the Verein der Irrenärzte of Lower Saxony and Westphalia, Dr. Hasse mentioned two cases, in one of which the patient suffered from acute mania and catarrh of the apices of the lungs; the latter had disappeared in four weeks. In the other case, a cavity existed in the lung, but healed up after a maniacal attack. It is worthy of note, that in both of these cases the patients had remained in bed, so that the curative influence of the maniacal attacks could not have been due to increased physical exercise, but must be ascribed to a specific change in the energy of the nervous system during mania. Dr. Vorster drew attention to the fact that, while mania always has a favourable influence over the respiratory function, the very reverse is the case in melancholia, which frequently in this way becomes a cause of phthisis.

CHAS. S. W. COBBOLD, M.D.

## THE STRUCTURE AND DEVELOPMENT OF GIANT-CELLS IN TUBERCLE.

By MM. CHARCOT and GOMBAULT.\*

THE following considerations refer only to that form of tubercle improperly called reticulated or cyto-genous tubercle. By giant-cells are understood

\* *Le Progrès Médical*, Aug. 24, 1878.

large bodies 20 to 200 micromillimètres in diameter, furnished with numerous peripheral nuclei, often with multiple prolongations, and the centre of which is occupied by a granular refracting mass of a quite special aspect; they are by no means peculiar to tubercle, as they are found in quite different formations (sarcoma, syphiloma, etc.); but further research must decide whether there is identity of nature, or only identity of appearance.

The tubercular granulation visible to the naked eye is very far from forming a tubercular unit, but is a complex growth made up of the aggregation of many small groups, each of which may be regarded as an elementary tubercle. These latter have received the name of submiliary tubercles, and may be found, not aggregated together to form a naked-eye granulation, but isolated more or less completely, so that their structure can be easily determined.

In this respect two varieties may be distinguished. Sometimes the follicle is formed by a heap of little round cells, pressed one against the other, to which the name of cellular tubercle has been given. Sometimes, on the other hand, it seems constituted of a sort of reticulum, in which are arranged flat cells, and which is called reticular tubercle. In all probability this reticulum is only a false appearance produced by the effect of reagents; the follicle being formed by a heap of cells, which are more developed and furnished with prolongations, so as to approach in their characters to the flat cells of connective tissue. All the elements of one of these elementary tubercles may be identical, or may differ. Thus, sometimes, three zones may be recognised in the follicle; the centre is occupied by a giant-cell; round this is a band of cells which, from their special characters, have been called epithelial cells; lastly, a third zone, external to all, formed by smaller elements, called the zone of embryonic tissue, or of reticular tissue, according as the follicle belongs to one or the other variety. Thus the seat of the giant-cell is in the centre of the tubercular follicle, the other elements being grouped around it.

When one of these giant-cells has been isolated by teasing, and placed so as to float freely in the preparing fluid, it can be seen to be furnished with a crowd of processes formed of granular refracting protoplasm, fixing picric acid strongly, and having a great tendency to interlace. By tapping upon the covering glass, movements may be communicated which serve to disengage a certain number of cellular bodies from the principal mass; these bodies are provided with processes and one or more nuclei. These cells, when completely isolated, are easily recognised as the epithelioid cells which have preserved their intimate connections with the giant-cell, the dimensions of which are found to be proportionately diminished. But, while watching this dissociation under the microscope, it is evident that many of these prolongations cannot be so detached, because they are intimately united with the giant-cell, and form part of it. Their protoplasm swells the moment they reach the nuclear zone; at this level they are still distinct one from the other; beyond, they become confounded with the general granular mass of the central part. If one push the operation further, he can see, under certain circumstances, the giant-cell resolving itself into a number of smaller masses provided with nuclei, and the cellular structure of which cannot be doubted.

The study of giant-cells, followed by the aid of sections, and especially by successive sections of the same cell at different levels, gives us further infor-

mation. Three successive sections, which we may take for examples, have given the following appearances. In the first was a true multinuclear patch (*plaque à noyaux multiples*). These nuclei, crowded together towards the centre of the patch, become rarer as they approach the periphery; hence a crowd of processes depart in every direction; at their bases they are thick, and often enclose a nucleus, but, becoming thinner, at length lose themselves in the neighbouring tissue. In a second section, the element appears in its typical characters; a granular refracting structureless centre, fixing picric acid strongly; outside, a thick zone of nuclei; farther outside, numerous prolongations radiating in every direction. In one spot, the nuclear zone is interrupted to a certain extent, and in a corresponding space the processes are completely wanting, indicating the internal relation between the nuclei and the processes of the cells. The third section, finally, shows us a little heap of cells, with brilliant protoplasm, and badly defined contours, at the centre of which the elements are grouped, so as to circumscribe a sort of opening, which can be followed into the thickness of the section by varying the adjustment of the microscope. Some few short, thick, granular processes unite this mass to the neighbouring tissues. In each of these sections the giant-cell has changed its form and constitution; moreover, it has varied in volume in considerable proportions. The first section is three times, and the second two and a half times as large as the third. From this it may be concluded that the giant-cell tapers towards one of its extremities; if the other half were the same, it would be fusiform, but at least it will be admitted that it is shaped like a little club with a handle and a swollen termination. The structure of the pedicle is identical with that of the peripheral zone of the swollen part. They are both formed of agglomerated cellular elements, only they have undergone a modification which has had the effect of soldering them together by partially pressing their protoplasm. The characters of this modification are well shown where the giant-cell sends out its processes, characters which have been already alluded to; the swelling of the protoplasm, its granular state, its tendency to interlace, its special refracting power, and its aptitude to fix picric acid to the exclusion of carmine. These different modifications are found in the tubercular new growth in various places outside the giant-cell, acting upon less complex parts, and in conditions consequently more favourable for observation. Such is the peculiar modification which affects the epithelioid cells of the follicle; such is that which attacks the cells originating from the interior of the alveoli; such, finally, is that which, under certain circumstances, involves the epithelioid lining of the vessels of a certain calibre.

In all these cases this modification of unknown nature, but which may be called vitreous transformation, produces identical effects. The cells augment in volume, and whilst their nuclei proliferate, their protoplasm takes on the above-mentioned characters. Then, the cells accumulating in greater or less number, their lines of separation progressively disappear by fusion of their protoplasm, and thus are formed the equivalents of the giant-cell. The termination of this process is known to be caseation; and no one can help being struck with the resemblance which exists, both from a physical and micro-chemical point of view, between the centre of the giant-cell and caseous matter. One is led, therefore, to conclude that the central part of the giant-cell has had



the same structure at one time, as its pedicle or its peripheral zone; that is to say, that it was formed of a mass of cells; that later these elements underwent vitreous metamorphosis, because fused and dissolved; that, in one word, the tubercular process proceeds in the giant-cell just as caseation does in the common granulation, from the centre to the periphery. If this idea is correct, the giant-cell is very far from being, as Schüppel thinks, an unique cellular element, the protoplasm of which, in a state of active proliferation gives rise to epithelioid cells by budding. It ought, on the contrary, to be considered as a multicellular nodule from the beginning, in which the tubercular process has reached its last stage, and is represented by two of its most characteristic products, the vitreous cell, and caseous matter.

ROBERT SAUNDBY, M.D.

#### BRIGIDI ON THE CHANGES IN THE SYMPATHETIC IN PSEUDO-HYPER- TROPIC PARALYSIS AND IN PROGRESSIVE PERNICIOUS ANÆMIA.

Two cases in which the pathological changes of the sympathetic in these diseases were noted, have been described by Dr. Brigidi.

The first case, related in the *Imparziale* for February 28, was one of pseudo-hypertrophic paralysis. The subject, N. N., a man aged 30, and his two brothers, belonged to a poor family, and were obliged to labour at an early age. After some time, they all perceived difficulty in walking; their gait became tottering, and when standing erect they kept their feet wide apart. Two of them died, but of what is not known.

The signs of altered muscular function advanced, and extended to the muscles of every part of the body. As the disease progressed, the patient was obliged to walk with his body bent forward, curved, and his knees bent, his hands resting on his hips. This state continued about two years, during which he visited the hospital twice. On the last occasion, being in Dr. Morelli's ward, he was carefully examined; and some muscles were found to be much wasted, while others were more developed than normal. Electric contractility was weakened, and in certain points destroyed. The muscles of the face alone were healthy. The patient died of a pulmonary affection.

At the necropsy, the voluntary muscles presented the characters of hypermegalia or pseudo-hypertrophic paralysis. On examining the sympathetic, the ganglia, especially the cervical, were found to be a little more coloured than normal. In the cervical and coeliac ganglia, the central and peripheral veins were much dilated. The arteries, which were large and empty, were not dilated. The nerve-cells were diminished in number; those nearest the vessels appeared more or less atrophied, and contained many pigment-granules of a deep-red colour inclining to black. There was hyperplasia of the connective tissue, and in some cases true sclerosis. The nerve-fibres containing myelin were few and small. Remak's fibres were indistinct, and in some places were replaced by connective tissue. The veins in the coeliac ganglia were less distended; but they presented nuclear proliferations and fatty degeneration.

In *Lo Sperimentale* for May 1878, Dr. Brigidi

publishes an article on the changes in the sympathetic in a case of progressive pernicious anæmia. The subject was a woman, aged 53, who was admitted into the hospital on November 3, 1877, presenting all the symptoms of a well-marked state of chloro-anæmia. In the hospital the patient continued to grow worse, and, without ever presenting fever, and preserving motion, sensation, and intellect throughout, she died on November 12, in spite of the abundant use of tonics and chalybeates, and the administration of meat and wine.

At the necropsy there was found to be extraordinary paleness of the skin, mucous membranes, and almost all the tissues of the different organs. The *panniculus adiposus* was abundant. The coeliac ganglia, examined in the fresh state, showed an abundant proliferation of nuclei, in some parts filling the capsules containing the nerve-cells. These appeared for the most part strongly pigmented; and their protoplasm was so turbid that it was difficult to see the nucleus without employing reagents. The blood-vessels were empty. Subsequent examination of the same ganglia after hardening in alcohol revealed other noteworthy peculiarities. On looking at one of the groups of nerve-cells, there were seen, here and there, parts where the cells were replaced by a considerable number of small globular elements, giving to the tissue the appearance of granulation-tissue. An analogous nuclear proliferation, but less abundant, was observed in other parts of the ganglion, and especially among the nerve-fibres. Those last, and especially the medullated cells, had in large numbers undergone fatty degeneration. In the blood-vessels, the epithelioid lining was much developed and in a state of degeneration; they were empty, and their walls were plaited together; around them was a large zone of fibrillar connective tissue, poor in nuclei, and in some parts connective tissue with narrow meshes formed by the anastomosis of the prolongations of stellate cells.

The author regards the case as one of progressive pernicious anæmia, in consequence of the course of the disease (ascending and slow, never interrupted, and ending in death), of the paleness of the skin and mucous membranes, of the prostration of strength, of the cardiac and gastro-enteric disturbances, and of the appearances at the necropsy; and he explains the connection of the anæmia with the coeliac ganglia as follows.

The changes in the ganglia, by their influence especially in the chylipoietic apparatus, must induce disorder of the circulation in the stomach and intestines, and disturb digestion, the functions of the intestines, and the absorption of chyle. This is a first reason of the dyscrasia of the blood. Secondly, the above-mentioned ganglia exert a retarding action on the heart, and the number of respirations is in strict and direct relation to the cardiac contractions; hence, when once the coeliac ganglia are diseased, there should be a diminished absorption of oxygen—that is, diminished oxidation. Here is the reason why the blood must contain an excess of fatty matters, which are deposited in the tissues that are found to contain them.

A. HENRY, M.D.

#### ANATOMY AND PHYSIOLOGY.

GRUBER ON THE ABSENCE OF THE QUADRATUS FEMORIS.—Professor Wenzel Gruber, of St. Petersburg, (*Virchow's Archiv für Path. Anat. und Phys.*,

Band xxxvii, Heft 3, s. 346, 1878), records the absence of the quadratus femoris muscle in eleven thighs of eight corpses of both sexes. Out of these it was absent thrice on both sides—twice in males, and once in a female subject—and was more often wanting on the left than on the right side. With the absence of the muscle, there was associated in every eleventh case either absence of the gemellus inferior or of both the gemelli; and in one out of five subjects in which this muscle was absent in one thigh, the fellow muscle of the other thigh was abnormally small. In only one thigh, moreover, has Professor Gruber seen a really rudimentary quadratus femoris. In order, finally, to show that Hallet was erroneous in terming the absence of this muscle in man as “Thierbildung”, he asserts that there is no mammal as yet known in which the muscle is constantly absent.

[The above cases appear to point to an opposite conclusion to that which has hitherto been arrived at. Meckel (*Handbuch der Mensch. Anat.*, Bd. ii, s. 552, Halle, 1816) records a case in which, while the muscle in question was absent, the gemelli were unusually strong. With the only instance in which Hallett (*Edin. Med. and Surg. Journ.*, vol. lxix, p. 20, 1848) found the quadratus femoris deficient, out of 105 subjects, there was also an unusual development of the two gemelli and the obturator internus. Theile, too, in the *Encyclopédie Anatomique* (Tome iii, p. 279, Paris, 1843), notices the occasional absence of the quadratus femoris in man, and observes that “alors les jumeaux ont plus de volume”. In the *Journ. of Anat. and Phys.* (vol. ix, p. 185), Bellamy records the absence of this muscle on both sides in a female. With this was associated a great and evidently compensatory development of the obturator internus and both gemelli. In a Cape ant-eater, *Orycteropus*, dissected by the reporter, while the quadratus femoris was absent, the gemelli were well developed (*Trans. of Linn. Society*, vol. xxvi, p. 589). Conversely, in a species of Armadillo, *Dasypus sexcinctus*, also dissected by the reporter, this muscle was in a good state of development, but the obturator internus was absent, and the gemelli very small (*Ibid.*, p. 551). Dr. Murie, in his monograph upon the Three-banded Armadillo, *Tridactylus conurus* (*Op. cit.*, vol. xxx, p. 96), states that while there was only “a pair of feeble gemelli”, a “longish goodly sized” quadratus femoris was present.—*Rep.*]

JOHN C. GALTON.

MEYER ON THE COSTAL PROCESSES OF THE LUMBAR VERTEBRÆ.—Hermann Meyer (*Archiv für Anat. und Physiol.*, 1877, p. 270) carefully tests the statement made by Frenkel, that the costal processes of the lumbar vertebræ are to be regarded, not as aborted limbs, but rather as true transverse processes. The hypothesis that the costal processes are aborted ribs is a very tempting one, and is apparently well based; it is, consequently, universally spread. The statements of Frenkel are somewhat remote from the main argument, though they form an important part of its proof. Professor Meyer, therefore, seizes the opportunity of showing by actual facts, whilst he refers to the more exact of Frenkel's statements, that the large transverse processes of the lumbar vertebræ are merely transverse processes, or, rather, parts of them, and are in no respect to be regarded as ribs.

The transverse processes of the twelfth dorsal vertebra is marked by three tubercles. The upper and lower extremities of the rounded border in which the

transverse process terminates are formed by a superior and an inferior tubercle, whilst an anterior tubercle lies in front of the inferior tubercle on the under surface of the transverse process below the rib. Tracing these tubercles upwards, it is seen that they become indistinct, and the anterior is rapidly reduced to a slightly rough ridge. In a good specimen the anterior tubercle of the twelfth, and slightly also that of the eleventh, dorsal vertebra appears as a spine. Passing downwards, it is readily seen that the superior tubercle becomes, in the lumbar vertebræ, the mammillary process, the inferior tubercle the accessory transverse process, and the anterior tubercle the costal process. These three processes taken together are to be considered as representing the transverse process, which in the dorsal vertebræ is in connection with the rib.

MEYER ON THE SINUS TRANSVERSUS OF THE OCCIPITAL BONE.—Professor Hermann Meyer (*op. cit.*, p. 271) gives the following account. The right lateral sinus is nearly always broader than the left; and in close connection with this point is the degree of roundness possessed by the angle between it and the extremity of the longitudinal sulcus. The reason for these appearances has nowhere been assigned, though it is evident that the normal return of the conditions specified must be dependent upon the relation in which the transverse sinuses are placed in regard to certain other parts. The explanation is not far to seek, when these relations have been once obtained. The greater breadth of the right lateral sinus, and the rounding of its angle of departure from the longitudinal sinus, are directly referable to the fact that the stream of blood which flows through it is stronger than the stream which flows through the left side; consequently, the right side of the longitudinal sinus is to be regarded as the chief channel. The reason why the current is stronger upon the right than upon the left side of the longitudinal sinus, is given by taking into consideration the conditions of the circulation below the neck. Regarding the direction of the blood-flow, it is seen that the vena innominata of the right side is the direct continuation of the jugular vein; whilst the vena innominata of the left side is a prolongation downwards of the subclavian. The vena cava superior, moreover, is in direct continuation with the right innominate, whilst the left innominate opens into it laterally. The venous flow of the right side from the base of the skull to the heart is, therefore, as short as it is direct, whilst that of the left side is longer by the whole length of the left innominate, and is twice interrupted by angles. The venous flow on the right side is, therefore, not only more easy in itself, but it is also assisted directly by the various forces of aspiration. From this it is readily seen that the easier course for the blood to take is through the right half of the sinus transversus, and that the flow is therefore correspondingly stronger through this part. Similar conditions producing contrary results are, however, found in the plexus pampiniformis, but the apparent contradiction can be explained by instituting a more careful comparison of the two cases.

It may be laid down as an established fact, that the varicosity of the spermatic plexus, which is shown as varicocele, occurs more commonly in the left testis. Varicosities, as is known, are due to a stoppage of the venous blood-flow, and it is easy to understand why this should occur more readily upon the left side, when it is recollected that the left spermatic vein opens into the left renal vein at a right



angle, whilst the right spermatic opens into the inferior vena cava at an acute angle. This is a case similar to the flow of venous blood from the left side of the head. The surrounding conditions explain why there occur in the one case varicosities, and in the other a narrowing of the blood-path. In the veins of the head, as already seen, this manifests itself less in a diminution in size of the path on the left side, than in a corresponding widening of the course on the right side. The channel on the right side will, therefore, be used in preference; and, whilst that on the left becomes narrower from want of use, the channel on the right, being more used, will become broader. In the left spermatic plexus, on the other hand, which is situated in such peculiar circumstances, that there is no possibility of a neighbouring vessel relieving it, there arise a true stoppage of the blood-current and consequent varicosities.

**DOWNES AND BLUNT ON THE INFLUENCE OF LIGHT UPON BIOPLASM.**—Dr. Downes and Mr. Blunt communicate to *Nature* (Aug. 8th, 1878, p. 399) a short but very clear note upon this interesting subject. The authors summarise the conclusions at which they arrived last year, viz., that light is more inimical to the development of bacteria than to the growth of the mycelial fungi which frequently appear in the cultivation-fluids; that the action attains its maximum in the waves of greatest refrangibility; and that the fitness of the cultivation-fluid to act as a nidus is not affected injuriously by the insolation. They next show that organisms which are provided with cell-walls appear to resist the destructive action of light for considerable periods, whilst spores are in the first place probably reduced to a state of torpidity, in which they may lie dormant for many months. In a set of experiments recently made, they have found that the soluble ferment of yeast (*zymase* of Béchamp, *ferment inversive* of Bertholet) loses its characteristic property of hydrating cane-sugar, after an exposure of three weeks to a midsummer sun; whilst a corresponding specimen, which was kept in the dark, retained its energy. From this experiment they conclude that the action of light affords no means of distinction between the "organised" and the "indirect" ferments. Experiments have been made with oxalic acid to afford some clue to the intimate nature of this action of light upon the organisms; guided by these, the authors assume as a plausible hypothesis that the phenomena are due to oxidation; and in the particular case of the oxalic acid to oxidation of the hydrogen, not of the carbon of the molecule. The hypothesis of oxidation is supported by the well known instability of the carbon compounds of which the bioplasm is composed, which is thus a predisposing cause for the destructive action of light.

D'ARCY POWER.

#### RECENT PAPERS.

On the Mechanism of Eructation: with Observations on the Entrance of Air into the Stomach of New-Born Children. By Dr. P. Weissgaber. (*Berliner Klin. Wochenschrift*, Sept. 2.)  
The Structure of the Spinal Cord in the Fœtus. By Dr. G. Bufalini. (*Lo Sperimentale*, September.)

#### PATHOLOGY.

CORNIL ON THE HISTOLOGY OF MUCOUS PATCHES ON THE TONSILS.—M. Cornil (*Le Progrès Médical*,

August 10) presented a memoir to the Académie de Médecine on the results of the examination of several mucous patches (*plaques muqueuses*) which he had removed in his practice at the Hôpital de Lourcine; the wounds healed readily.

*First variety: opaline mucous patch.*—The epithelium is thickened, the papillæ elongated, and the deeper connective tissue thickened by infiltration with new cells. The superficial layer of epithelium presents cells with cavities round their nuclei; frequently also the cavity of the cell is filled with pus instead of the nucleus. Moreover, in this same layer there are little nests filled with globules of pus, little abscesses hollowed out amidst the epithelial cells, containing from four to ten, or even up to a hundred globules of pus. These collections of pus give the appearance of opalescence.

*Second variety: ulcerated mucous patches.*—The epithelial layer is disintegrated by a great quantity of liquid and pus-globules coming from the papillæ. The epithelial layer may be completely destroyed, and the inflamed papillary body form the base of the ulceration. There exists sometimes a true false membrane, grey, adherent, diphtheritic, upon this ulceration. The false membrane contains no parasites, but the branching state of the epithelial cells, the holes or cavities in them filled with pus, present the same aspect as in diphtheria.

In both cases the closed follicles of the tonsils were inflamed, and the whole organs were hypertrophied. The lymphatic sinuses round the follicles and the reticular tissue presented a variable quantity of large cells, with one or more nuclei containing red blood-corpuscles. This follicular lesion is identical with that which the author described in the glands in the first and second stages of syphilis. In short, the syphilitic tonsils in the second stage represent a papule upon a syphilitic gland.

**DÉJÉRINE ON CONCENTRIC HYPERTROPHY OF THE HEART.**—M. Déjérine, in a communication to the Société Anatomique (*Progrès Médical*, August 3), reports a case of idiopathic concentric hypertrophy of the heart in a lad aged 18, whose work obliged him to carry heavy loads. He had never had rheumatism, and there was no history of alcoholism or syphilis. He died of ascending myelitis. There was no abnormality of the heart to be observed during life, except a little exaggeration of the impulse. At the necropsy the heart was found of normal size, but the "left ventricle was much larger and harder than natural; and on section its walls were more than 3 centimetres (an inch) thick, and the cavity only represented by a narrow slit, scarcely admitting the point of the index finger." There was no interstitial nephritis.

**SENATOR ON THE RELATION BETWEEN CARDIAC HYPERTROPHY AND RENAL DISEASE.**—Dr. Senator of Berlin (*Virchow's Archiv*, Band lxxiii, Heft 3) discusses this question at some length. He considers that where no obvious mechanical cause of cardiac hypertrophy exists, the explanation is to be found in the state of the blood in chronic parenchymatous nephritis and in the state of the terminal arterioles in chronic interstitial nephritis; in the latter it often happens that hypertrophy exists without dilatation, or even with narrowing of the cavity of the ventricle; these cases he regards as idiopathic primary hypertrophy, as he says hypertrophy consequent upon obstruction, or difficult in discharging the contents of the ventricle, must be associated with dilata-

tion. The cause of this idiopathic hypertrophy may be nervous, as in Basedow's disease; or more probably it may be due to some state of the blood. The high tension in the aorta is due to the state of the terminal arterioles. He leans to Gull and Sutton's theory, and believes that the kidney-affection is a consequence or concomitant of the general disease.

VON BUHL ON BRIGHT'S GRANULAR ATROPHY OF THE KIDNEY AND THE ACCOMPANYING CARDIAC HYPERTROPHY.—Von Buhl (*Centralblatt für die Med. Wissenschaften*, September 14, 1878) opposes the views of Traube and of Gull and Sutton by the following considerations. 1. There is excentric hypertrophy of the left or both ventricles without granular kidney (25.7 per cent. according to Gull and Sutton). 2. There are cases of exquisite granular kidney without hypertrophy and dilatation (in quite 8 per cent.). 3. In granular kidney, the hypertrophy of the left ventricle is often unaccompanied by dilatation (0.6 per cent.) 4. General dilatation of the whole arterial system is absent; this would be an important consequence of increased tension. 5. All other renal atrophies (congenital cystic kidney, hydronephrosis, fatty kidney, etc.) do not bring about excentric hypertrophy of the left ventricle. 6 and 7. The hypertrophy of the right ventricle is not explained by Traube's theory (simple hypertrophy of the left ventricle in 21.4 per cent. against double-sided hypertrophy in 70.8 per cent.); also this is not explained by fatty degeneration of the muscular wall of the left ventricle, as this is often absent even when the right side is fatty. 8. The hypertrophy of the left ventricle is often present before the granular degeneration of the kidney (Bamberger, Schrötter). Against Gull and Sutton's theory he urges again, first, that at the commencement of the renal disease the fibroid thickening of the arteries and veins is not present; and, secondly, that nearly always the kidneys are the only organs involved, seldom any other. The last point is very striking, if arterio-capillary fibrosis were the cause of the renal degeneration as part of a general process.

Von Buhl's views are the following. 1. Both organs become diseased together. The hypertrophy is to be attributed to the increasing capacity of the heart. This view is supported by the appearance of cardiac hypertrophy before the atrophy of the kidney, and the excentric hypertrophy of the right ventricle; also by the fact that we frequently find remains and results of previous inflammation of the heart, the origin of which can hardly be fixed, at the beginning of the disease; 35 per cent. of pericarditis; 20.6 of valvular disease, endocarditis, and vegetations; 55.9 per cent. of retained sufficiency of valves, with inflammatory fatty degeneration of the muscular fibre; 9.8 per cent. of aneurism, ruptured heart, and vitreous swelling of muscles. 2. The myocarditis may leave the heart unchanged, but atrophy may occur, though hypertrophy is the more common. The hypertrophy is effected in the following manner. In the first place, the cavities of the heart dilate on account of the diminished resistance of the heart-muscle to the blood-pressure. At the conclusion of the inflammatory process, the heart-muscle hypertrophies by over-nutrition, and by the increased work of the dilated ventricles. The fact is quite new that a relative narrowing of the aorta often co-exists. To overcome the resistance of the narrowed aorta the left ventricle must hypertrophy. 3. The increased tension in the aortic system, and the cardiac hypertrophy, are not due to the granular atrophy, nor to a diffused capil-

lary fibrosis; but, on the contrary, the increased tension in the aortic system is dependent upon the hypertrophy of the left ventricle and the relative stenosis of the aorta. The increased tension is, on account of the shutting of the valves, only systolic. 4. The arterial change is a consequence of the cardiac disease. The thickening of the renal arterioles is secondary. The 13 per cent. of lung-affection (desquamative pneumonia and cirrhosis of lung) is an analogous process to the renal disease. In all other organs the consequences of Gull and Sutton's disease are atrophy and thickening; in these are to be found the causes of death in Bright's disease. In reference to the etiology it must be remembered that immoderate muscular exertion, especially of the heart, leading to myocarditis, excentric hypertrophy, and the other elements of Bright's disease, must be regarded as a frequent cause of that disease.

FENOMENOW ON THE TESTIS IN TYPHUS.—M. Fenomenow (*St. Petersburger Medicinische Wochenschrift*, July 8), has examined the testes in twelve cases, of which five died of exanthematic typhus, three of abdominal typhus, two of bilious typhoid, and two of a mixed form of abdominal typhus and recurrent fever. The best preparations were obtained by hardening in alcohol, the sections were stained with hæmatoxylin and mounted in glycerine. The changes observed were in the epithelium of the seminal ducts, and the epithelioid lining of the blood-vessels. In both it consisted of enlargement of the cells, obscurity of outline, nuclei obscured by granular masses soluble in ether. The changes in the vessels appeared to precede those in the ducts. In some places there were small hæmorrhages, but these are not specially described.

[The importance of these observations is somewhat diminished by the results of Dr. Litten's experiments (Virchow's *Archiv*, May 1876; *Lond. Med. Record*, August 15, 1877), which showed that such fatty metamorphosis of the tissues was the constant effect of high temperatures.—*Rep.*]

WYLIE ON ADDISON'S DISEASE.—Dr. John Wylie (*Glasgow Med. Journal*, September 1878) describes a case of Addison's disease in a married woman, aged 39, who had noticed discoloration of the skin which had been coming on for twelve or fourteen months. She complained of general weakness, disinclination for exertion, palpitation, gastric irritability, and vomiting of a most persistent kind. She had had rheumatic fever six years ago. Her parents were healthy; her children were all alive and healthy; she was now pregnant. The skin was "smooth and soft, of a yellowish colour, but merging into a much deeper shade in those places which are naturally the seat of pigment, such as the areolæ of the nipples, the axillæ, abdomen, etc." She died of rheumatic fever. The organs were all healthy, except the suprarenal capsules. The left was larger than the right, and on cutting through it, about a teaspoonful of yellowish pus-like fluid escaped. The normal structure of the capsule was converted into hardened cheesy nodules, which here and there grated under the knife. The right capsule was small, containing more of the pus-like fluid but less cheesy matter.

ROBERT SAUNDBY, M.D.

CATON ON A CASE OF ABSENCE OF THE INTER-AURICULAR SEPTUM, WITHOUT CYANOSIS, IN A MAN AGED FORTY.—Dr. Richard Caton, in the *Lancet*, August 1878, p. 252, reports an interesting case illustrating the truth of Stille's observations that



complete admixture of arterial and venous blood may take place without cyanosis being present. Many cases have been reported (*vide Medical Digest*, section 763-4), Dr. Caton justly remarks, where, with a large open foramen ovale, no cyanosis existed; but in this case, with greatly dilated auricles, an aperture existed measuring at least three inches in all directions.

August L., a powerfully built muscular man who had had good health all his life, and been twenty years at sea, was admitted to the Liverpool Northern Hospital on December 10, 1877, suffering from dyspnœa, œdema of the legs, and ascites. Three months previously he had a similar attack. On admission the patient was somewhat cyanosed, and had much cough and expectoration. Pulse 50, intermittent, unequal; temperature, 100°; arteries rigid; cardiac dulness greatly enlarged; sounds normal; veins of the left side of the neck dilated and pulsating, synchronously with cardiac diastole, and filling from below; lungs resonant; expiration prolonged; crepitation at both bases, and *râles* nearly all over; stomach and bowels healthy; urine pale, acid, sp. gr. 1007, no albumen. Rest and milk diet quickly relieved all the symptoms. Towards the close of December he had a relapse, which quickly passed away, and he left the hospital on the 18th of January 1878, intending to return to work. On the 29th of the month he returned much cyanosed, with great dyspnœa, the lungs being full of crepitant *râles*. On the next day, he fell dead while attempting to get out of bed. A *post mortem* examination showed the pericardium to be generally adherent; the ventricles, auricles, and appendices were greatly dilated. The pulmonary artery was unusually large, and so were its branches throughout. All the valves were healthy. No communication existed between the aorta and the pulmonary artery. There was no partition between the auricles; a disc of cardboard, three inches in diameter, just fitted the orifice.

RICHARD NEALE, M.D.

CREIGHTON ON THE PATHOLOGICAL FUNCTION OF THE PERIOSTEUM.—Dr. Creighton (*Journal of Anatomy and Physiology*, April 1878) quotes from a former paper, as the key-note of the one before us, the following sentence, viz.: "The primary tumour, if it is on an epithelial organ, can be accounted for rationally by following out the functional aberrations of the organ, and if it grows from a tissue, like periosteum, it can be rationally explained as a departure from the cellular laws of nutrition or of growth." Periosteum is not only a typical example of connective tissue, but, on account of its formation of osteoblasts, it is brought into comparison with a secreting organ. It is one of the most dangerous of all connective tissues, for the greater number of the malignant sarcomatous tumours originate from it. The tumour especially referred to by Dr. Creighton might be classed amongst the alveolar sarcoma, but its chief interest lies in the close resemblance it has to one of the stages found in the formation of bone out of membrane. The matrix tissue is periosteum, the trabeculae are bone-trabeculae, the alveolar spaces are medullary spaces, and the tumour-cells are osteoblasts. Had earthy matter been deposited during the early stages, the formation of the alveoli and trabeculae would have been arrested, and no tumour would have appeared; but, in the absence of the earthy matter to arrest the indefinite formation of new cells, the preliminary changes that must necessarily occur during the formation of new bone

continued until a tumour was formed, as the result of an exaggeration of a normal function. This abnormal production of material out of which, under normal circumstances, bone would be formed, at last indicates its malignancy by giving rise to secondary tumours in other organs; the secondary tumours, whether they appear in the lungs or liver, almost exactly resembling in structure the primary tumour from which the infection spread.

GRAWITZ ON THE FUNGUS OF THRUSH.—Dr. Paul Grawitz, in a contribution to the systematic botany of vegetable parasites (Virchow's *Archiv*, August 1877), points out that in thrush-patches, besides epithelial cells, various forms of bacteria, torula cells, and myelin of pleospora, oidium lactis, and mucor mucedo, and others, there is always the proper thrush-fungus—*mycoderma vini* (not the so-called *oidium lactis*). This specific fungus the author succeeded in isolating, and was able to cultivate in a modification of Pasteur's solution, as well as in plum-pulp. The appearance it assumed under cultivation depended on the amount of sugar present; when there was little sugar, it formed a widely spreading mycelium; when a considerable quantity, it formed dense clusters of torula-like buds. When this fungus was administered in milk to healthy kittens and puppies no result followed, but when it was given to feeble, ill-nourished, and thus predisposed animals from three to eight days old, death followed in from four to ten days, and on examination the characteristic small white patches were found on the gums and fauces. Other fungi failed to produce the same results. Experiments with other fungi, *achorion Schönleinii*, *trichophyton tonsurans*, and *microsporon furfur*, led Dr. Grawitz to believe that they were all identical, and simply the familiar *oidium lactis*.

With Virchow, the author believes that occasional parasites, especially those found with lung-diseases in cases of diabetes, are of secondary importance.

When spores of fungi (*penicillium*, *euroteum*, *mucor*, *oidium*, and *muscardine*) suspended in distilled water were injected into the carotid artery or one of the large veins, no results followed, except when bacteria were injected along with them, the bacteria setting up septic poisoning. The spores injected never germinated; they were either dissolved or eliminated by the kidneys. When introduced into the subcutaneous tissue they were either absorbed, encapsuled, or eliminated by suppuration. When the spores of *oidium* were introduced into the vitreous chamber, they germinated and formed small nodules composed of convoluted masses of mycelium threads. The vitreous humour seems to have been the only place which supplied all the conditions necessary for their growth. The influence of fungi on the system seems to be altogether of a mechanical nature.

J. C. EWART.

APPERT ON THE MIGRATION OF WHITE BLOOD-CORPUSCLES IN INFLAMMATION.—Appert, in Virchow's *Archiv*, Band lxxi, p. 364, has obtained the following results in experimenting with frogs in relation to this point. 1. Quinine, in doses of  $\frac{1}{3500}$ th to  $\frac{1}{4000}$ th of the body-weight, not only hinders the migration of white corpuscles at the centre of inflammation, but prevents their stagnation on the walls of the vessel. The cells which are found within the vessel have a dark appearance, and exhibit few or no amœboid changes. 2. Quinine, in a dose of  $\frac{1}{475}$ th of the body-weight, injected in small quantities under

the skin of the frog, in the course of three or four hours diminished the diapedesis for two to three hours without modifying the central current, and without causing the white corpuscles to leave the wall. The pulse was rendered feeble, the circulation was slowed, and the vessels were contracted. 3. Quinine in a dose of  $\frac{1}{8000}$ th of the body weight had no effect. The experiments were made upon the tongue, and the author obtained the same effects by ligaturing the two arteries without the veins; a considerable tightening of the ligature gave rise to the same effects as a strong dose of quinine, whilst the ligature less strongly applied was equivalent to a weak dose of quinine. D'ARCY POWER.

### RECENT PAPERS.

Researches on the Changes of Matter in Febrile Diseases. By Dr. G. Wertheim. (*Wiener Medizin. Wochenschrift*, August 10, 24, 31.)  
The Histology of the Degenerative Process in the Human Spinal Cord. By Dr. F. Schultze and Dr. Th. Rumpf. (*Centralblatt für die Medicin. Wissenschaften*, Sept. 14.)

### MEDICINE.

KELP ON A CASE OF CEREBELLAR DISEASE.—In Betz's *Memorabilien*, xxiii Jahrgang, Heft 5, Dr. Kelp relates the following case, and makes some remarks upon it.

J. H., a peasant, aged 36, had been intemperate in his habits for four years; during that time he often complained of pains and twitching in his limbs, was confused in his mind, and said strange things, e.g., that a workman in the house had bewitched him. For the last year he had become easily fatigued, and his gait was not quite steady, so that he was often obliged to rest while walking; he was also forgetful and dreamy. Quite recently he had become very excited, was unable to sleep, and destroyed his bedding. There had been no other cases of insanity in the family.

About a month after this excitement came on, he was admitted into the asylum at Wehnen. He was then very "lost", did not know where he was; his gait was very unsteady, it resembled that of a drunken man, and he tended to fall backwards. There was general muscular tremor; the eyes were dull, pupils equal, face congested, and nose very red. He was unable to answer any question, dressed and undressed himself listlessly, was dirty in his habits, and uttered inarticulate sounds. His appetite was good; pulse 100. He remained for several days in bed, as he was subject to attacks of vertigo. After two months, hæmatoma of the right ear was developed, paralysis of the lower extremities came on, and the patient fell towards the left side; the right side of the face was drawn down; the skin was remarkably cold; pulse 50. The paralysis continued to increase, the surface-temperature to decrease; the pulse sank to 36, the temperature to 80, and death took place after little more than two months' treatment.

After death, the head only was examined. The dura mater was much thickened throughout, and bound to the pia mater by adhesions which required the knife to divide them. The pia mater was firmly adherent to the cortex, its vessels injected. The cerebrum was normally formed, of firm consistence; no proliferation of tissue could be detected. The cerebellum weighed a little over five ounces; both its hemispheres showed extensive softening; where this was most marked, the tissue was of a bright grey colour. The left

hemisphere was affected more extensively and in a greater degree than the right; in the centre of the left posterior superior lobe there was a spot of softening, of the size of a walnut; the surrounding tissue was also affected, but in a less degree. The arbor vitæ was ill-defined and discoloured, but the medullary substance and the connections with the medulla oblongata, corpora quadrigemina, and pons Varolii were of normal consistence. The softening in the right lobe was in the same situation as in the left; the arbor vitæ appearance was fully developed, and the surrounding tissue normal. The pons Varolii, olivary bodies, and medulla oblongata presented no morbid changes.

The abuse of stimulants must be regarded as the chief cause of cerebellar disease in this case; the most characteristic symptoms were the staggering gait resembling that of drunkenness, the attacks of giddiness, the tendency to fall backwards, and the tremor of the limbs. The confused state of the patient's mind must be ascribed to the affection of the cerebrum and its coverings, and the motor symptoms to the organic changes in the cerebellum.

In a recent paper on cerebellar disease (*see London Medical Record*, June 1878) Professor Nothnagel gives his support to the view that disturbances of co-ordination are caused by morbid changes in the cerebellum, but he also states his opinion that these disturbances of co-ordination only occur when the median lobe (vermiform processes) is directly or indirectly affected by the disease. Dr. Kelp holds that his case quite disproves this proposition, as he states that the vermiform processes were in no way affected, though motor disturbances were present.

As the spinal cord could not be examined, it was not determined whether the tabic grey degeneration of its columns was present. The author thinks that this would not have been found, for the gait of a tabic patient lacks the peculiar resemblance to that of the drunkard which was observed in this case. The marked trembling of the extremities and the rapid development of the disease are also points against the diagnosis of tabes.

For some time before his death the patient's body was constantly rotated towards the left side, and this twisting always recurred immediately after it had been righted by force. This symptom is ascribed by Kelp to the fact [apparently contradicted in the above report of the *post mortem* appearances—*Rep.*] that the middle peduncle of the cerebellum, or the fibres radiating from it into the cerebellum, was involved in the morbid process.

CHARLES S. W. COBBOLD, M.D.

BASTIAN ON TWO CASES OF CEREBELLAR DISEASE.—In a clinical lecture reported in *The Lancet*, August 1878, pp. 207, 245, Dr. H. C. Bastian treats of two cases of head-injury occurring in children, that were followed by symptoms indicative of disease of the cerebellum.

Ada B., aged five, in April 1877 fell backwards from a high table and struck the occiput. The scalp was bruised, not cut; she did not cry much, and was not rendered insensible. For a week she made no complaint, but then became dull in manner, and increasingly so.

A month after the accident she began to start in her sleep, and during the day had attacks of vertigo. A week later, early morning sickness set in, at which times she had severe occipital pains, generally passing off with the sickness. This state of things continued many months, but was not always constant;



sometimes she was not sick for several days, sometimes she had pain and no sickness.

Towards the end of December 1877, she again fell, striking the left eyebrow against the corner of a drawer. Nine months after the original accident (January 1878) she was first noticed to stagger in her walk, although, six weeks previously, her father had remarked that she was weaker than before. A little later she was noticed to fall forward on her face, her speech became thick and indistinct, with a kind of vacant look or stare, but no squint.

On May 10, 1878, when Dr. Bastian first saw her, she could not walk across the room alone, nor could she sit upright in a chair; she was obliged to lean back, and her head was inclined to the left. Her gait was unsteady, like one only partially drunk. She did not reel if the eyes were shut and she were standing still. The occipital pain and sickness were less than formerly. She was placed upon iodide of potassium and cod-liver oil in increasing doses, until July 30th, when a marked improvement was noticed.

Jessie J., aged ten, was admitted under Dr. Bastian's care, Sept. 18th, 1877. In April 1877 she had fallen downstairs, striking the occiput and the lumbar region. There were no external wounds, but a lump on the occiput for a day or two. She complained of pain in the head for an hour or two, and next day was obliged to return from school on account of headache. After this, she was always ailing more or less. Two weeks subsequent to the fall she was thrown from a low swing, and struck the back of her head slightly, after which occipital pains became frequent, and associated with vomiting. This generally occurred early in the morning, but not exclusively so. In June, after keeping her bed for five weeks, she had a sort of fit. There was no difficulty noticed in her walking before that time, although she was not able properly to support her head. When she left her bed, however, it was noticed that she staggered much, and trod principally upon her heels. At this period her sight began to fail, the occipital pains and sickness continuing as before. She was placed under the same treatment as the previous case, and in May 1878 was quite well, except in her power of walking; treading over much on her heels, keeping her legs wide apart, reeling slightly, and occasionally bringing the feet down quickly.

Commenting upon these two cases, Dr. Bastian explained the cause of the varied and perplexing dissimilarity of symptoms in cerebellar disease. If there be increase to the bulk of the cerebellum by effusion, suppuration, or growths, bound down as it is in its "tentorial chamber", the abundance and prominence of extrinsic symptoms may be easily understood. Hence often arises hemiplegia from pressure upon the pons or medulla, but with facial paralysis absent, or but little marked, and the leg more powerless than the arm. Often, too, the sensibility is not all impaired. When occipital headache and vomiting are associated with amblyopia or amaurosis and staggering gait, the diagnosis of cerebellar disease is arrived at with considerable certainty. In the case of Jessie J., it is probable that, following the fall, a small abscess was formed in the cerebellum, which became gradually absorbed, and that soon the shrunken cyst-like cavity will be filled up, and that the child will perfectly recover.

With regard to Ada B., it is more difficult to arrive at a decided opinion, though perhaps the course of events have not been very different, although it is possible that we may have to do with a

small tumour; still the child is improving, and time alone will decide the extent of this improvement.

**NEALE ON THREE INFECTIOUS DISEASES COEXISTING IN ONE PATIENT.**—Dr. Neale reports a case in *The Lancet*, August 1878, p. 204, in which pertussis, mumps, and varicella were all running their course at the same time; the lad, aged ten years, appearing but little the worse for his attacks, not being confined to his bed nor declining his food.

**BRADBURY ON A LARGE HYDATID CYST OF THE LIVER, THRICE ASPIRATED WITHOUT THE WITHDRAWAL OF ANY FLUID: DEATH: NECROPSY.**—Dr. J. Bradbury, in the *British Medical Journal*, Aug. 1878, p. 166, reports an instructive case in which the presence of an hydatid cyst was diagnosed, and yet three careful aspirations yielded negative results; why the three exploratory punctures so signally failed, even the *post-mortem* examination did not explain.

A man, aged 42, was admitted into Addenbrooke's Hospital October 31st, 1877, with a tumour in the epigastric region, diagnosed as an hydatid cyst. On November 2nd, the needle of an aspirator was plunged in for three and a half inches in two distinct places, with no results. The patient left the hospital, and was readmitted March 5th, 1878. On the 19th of the month aspiration was again performed, with the same result as previously. The patient again discharged himself on April 17th, and died suddenly April 20th. On examination, a large hydatid cyst was found, with walls of cartilaginous hardness. Dr. Bradbury would be glad of any explanation to account for his want of success in removing the fluid.

**SMITH ON WESTPHAL'S TEST FOR LOCOMOTOR ATAXY.**—Mr. W. Beattie Smith brings forward a case in the *Lancet*, August 1878, p. 223, where the normal "leg phenomenon" was present to an unmistakable extent, in a patient suffering from well-marked locomotor ataxy, concerning the existence of which there could not be a doubt, and yet the "tendon reflex" of Buzzard and Westphal caused an upward movement of the foot to the extent of four to six inches. At page 314, Dr. Buzzard questions whether Mr. Smith's observations were made on a "typical case" of locomotor ataxy, inasmuch as there were no ophthalmic troubles.

RICHARD NEALE, M.D.

**MANCINI ON A CASE OF CEREBRAL RHEUMATISM WITH CATALEPSY.**—In *Lo Sperimentale* for March, Dr. Mancini relates the case of a blacksmith, aged 33, who, after having had four slight rheumatic attacks, was seized in September 1877, after sweating profusely, with *malaise*, weariness, loss of appetite, and pain and swelling of the knees and feet. He had nearly recovered, when he was one morning awakened by the noise of an alarm clock in an adjoining chamber. From this time he became fond of solitude, taciturn, reserved, inimical to all human intercourse, desirous of neither food nor drink; and he complained also of severe headache.

When received into hospital on December 11th, he was noted to be of robust constitution, well formed, but imperfectly nourished. He lay on his back; his face was without expression. He did not answer questions, and did not move when threatened. The

eyes were fixed, and the pupils insensible to light. Sight and hearing were normal; the sense of smell was impaired. The sensations of heat and pain were lost. Reflex motion was absent. Galvanic and farado-muscular contractility was increased. Speech was impossible; the rectum and bladder were paralysed. The trunk and limbs remained in whatever position was given them.

Considering the previous attack of articular rheumatism, and the sudden appearance of the nervous disorder during convalescence from this disease, Dr. Mancini believes that the case was probably one of cerebral rheumatism.

The treatment consisted in the administration of infusion of lime-flowers as a diaphoretic, and the application of sinapisms to the lower extremities. The man soon improved; all morbid symptoms disappeared; and, ten days after he was admitted to hospital he was perfectly convalescent.

VIZIOLI ON REFLEX PARALYSIS.—At a meeting of the Royal Medico-Chirurgical Society of Naples (*Il Morgagni*, 1878), Dr. F. Vizioli presented a man suffering from reflex paralysis. The patient, a healthy robust man, aged 48, had been struck in the front of the neck by a knife, which produced an extensive but superficial wound. In the evening he perceived numbness on the right arm and shoulder, which soon became incapable of motion. When he was shown to the society, four months after the injury, motion was almost abolished in the right arm, and there was marked emaciation of all the brachial and scapular muscles. Electro-muscular sensibility was slightly increased in the paralysed as compared with the corresponding sound parts; there was no alteration in the sense of touch, nor in the sensations of heat or pain. Electro-muscular contractility, faradic and galvanic, was normal even in the paralysed and atrophied muscles. The temperature of the affected muscles was slightly lower than that of the healthy ones.

The author, considering that the retention of electro-muscular contractility indicated a central lesion, on which the atrophy of the muscles of the arm and shoulder depended, and that there was no concussion or fall, and thus reducing the cause of the malady to the wound received, concluded that the cutaneous irritation produced a process of irritation in the medulla—that is to say, hyperæmia of the meninges and capillary apoplexy in the spinal cord; and that this explains the rapidity with which the paralysis appeared a few hours after the injury.

As regards the atrophy, he refers it to the impaired trophic influence of the medulla rather than to defective functional energy in the muscles.

A. HENRY, M.D.

RIEGEL ON PULSUS BIGEMINANS AND ALTERNANS.—E. Riegel, in the *Deutsches Archiv für Klinische Medicin*, Band xx, has observed fifty-nine cases of pulsus bigeminans and alternans in the course of a single year. He therefore argues that they are not of unfrequent occurrence. The cases were mostly old people, with atheromatous arteries; but these conditions have been met with under all circumstances, in anæmia, cachexia, heart-disease, cerebral diseases, and in febrile attacks. The pulsus bigeminans and alternans is frequently varied with an entirely irregular, and sometimes with a perfectly normal pulse. The variation, therefore, is simply an irregularity which makes its appearance when there arises a want of

adjustment between the power of the heart-beat and the work to be done; consequently such variation does not possess the unfavourable prognostic importance which Traube has assigned to it.

D'ARCY POWER.

HUNTER ON IDIOPATHIC PERICARDITIS.—Dr. Walter Hunter (*Glasgow Med. Journal*, September 1878) describes a case of idiopathic pericarditis occurring in a young girl aged 10, who had never had any serious illness. There was no history of cold or injury, nor affection of the joints. She complained of pain at the præcordia, increased on pressure; the pulse was 90, regular; respiration was hurried (number not given); over the cardiac region a harsh grating sound was heard, accompanying "both systole and diastole of the heart". Some days later there were symptoms of effusion. There was never any endocardial murmur. Respirations were never over 30. The temperature is not recorded. The case terminated well; but the author believes that the pericardium is now adherent, as there is drawing in of the intercostal spaces during the heart's systole. The urine was never albuminous.

[It would be interesting to know whether there is any history of acute rheumatism in the family.—*Rep.*]

ROBERT SAUNDBY, M.D.

#### RECENT PAPERS.

The Value of Clinical Odours. By Dr. T. J. Hutton. (*New York Med. Journal*, September.)

Clinical Lecture on Syphilitic Brain-Lesions. By Dr. E. Seguin. (*Ibid.*)

The Causal Connection between Urticaria and Malaria. By Dr. Kersch. (*Betz's Memorabilien*, September.)

Tuberculosis an Infective Disease. By Dr. H. Reich. (*Berliner Klinische Wochenschrift*, September 16.)

Case of Spastic Spinal Paralysis: Recovery. By R. von der Velden. (*Ibid.*, September 23.)

Three Cases of Progressive Muscular Atrophy. By Dr. A. Rohden. (*Deutsche Medicin. Wochenschrift*, August 31.)

On Chronic Gastric Catarrh and Ulcer of the Stomach. By Dr. W. Maschka. (*Wiener Medizin. Wochenschrift*, Aug. 17, 24.)

#### SURGERY.

REVERDIN ON RESECTION OF THE WRIST.—In some remarks on a successful case of resection of the wrist (*Bulletins et Memoires de la Société de Chirurgie de Paris*, Tome iv), M. J. L. Reverdin points out that the object of this operation is the conservation of an organ of tactile sensibility as well as of movement. In almost all instances resection of the wrist has been performed in the treatment either of white swelling of this joint, of penetrating wounds with or without fracture, or of arthritis occurring immediately or remotely as a result of such injury. In each of these instances, however, the operation is performed under unfavourable circumstances. The subject of white swelling is usually a scrofulous individual in a bad state of health, and debilitated by long-continued suppuration; there is always a risk of a return of the local disease, and the good results of a successful operation may be compromised or destroyed through the development of some visceral affection. It should be remembered, however, that even under the unfavourable conditions that attend white swelling, good results have been obtained from excision of the wrist by Lister and other surgeons. This operation has not given very brilliant results when applied in military surgery and in the treatment of injuries to the joint. In ten cases collected by Langenbeck in which the operation was per-



formed after gunshot wound, two patients died and eight recovered. In two of the eight successful cases there was ankylosis, in one there was a very movable false-joint, and in each of the five remaining instances the hand remained quite useless. Of five cases reported by Dr. Otis, of total resection of the wrist performed during the American war, two only were successful; in three instances the hand could not be used, and in one it was necessary, in consequence of secondary hæmorrhage, to amputate the hand. The case recorded by M. Reverdin was one of suppurative arthritis by propagation. There was no fracture, and no traumatic disturbance of the peri-articular soft parts. The patient, a male aged 41, was quite free from any scrofulous taint, and about the affected joint there had been some inflammatory action capable, according to Ollier, of renewing in the periosteum regenerative properties that in adult life usually remain latent. The disorders in the peri-articular structures had been those merely of a simple inflammatory nature. This case, taken with two others, one reported by Lister, the other by West of Birmingham, seem, according to M. Reverdin, to indicate that in acute suppurative arthritis of the wrist the surgeon may fairly expect, notwithstanding the inflammatory complications, to preserve through resection, a very serviceable hand. M. Reverdin in this case performed Lister's operation. In consequence of much swelling and induration of the parts around the wrist-joint, the proceedings were attended with difficulty, and the swollen structures were at some points torn and contused. It is pointed out that ablation of the bones of the carpus demands much patience on the part of the operator, and that it must always be a long and laborious if not difficult proceeding. The author is disposed to recommend, in order to facilitate the operation, freer exposure of the diseased bone through division of the extensor tendons. He holds that under present conditions of antiseptic surgery we may expect to attain union of tendinous and other soft parts by primary intention. The division of one or more of the extensor tendons during the operation of excision of the wrist is, it is argued, less likely to result in harm than the denudation of such structures along a considerable extent, or than the contusion and laceration caused by forcibly stretching them to one or the other side. Excision also is recommended of a small portion of each divided extensor tendon, when a portion of the skeleton of a limb has been removed. Unless extensive osseous regeneration take place, the tendons become too long and the muscles cannot act with proper efficiency. That sufficient regeneration of the bones can take place after resection of the wrist is impossible; and therefore, until the extensor muscles or their tendons undergo shortening, the fingers cannot be well extended. It would not be necessary, it is held, to divide any of the tendons in front of the wrist; for, in consequence of the shortening of the extensor tendons the fingers could be drawn backwards, and so placed in the most favourable condition for the efficient action of the relatively elongated flexor tendons.

**HUETER ON THE TREATMENT OF ERYSIPELAS.**  
—As the treatment of erysipelas by subcutaneous injection of diluted carbolic acid, first carried out by Professor Hueter, has recently been much discussed, and as different views have been formed as to the efficacy of this plan, it occurred to Dr. Hermann Hueter that it would be well to describe fully this

method of dealing with erysipelas, as it has been carried out for some time at the surgical clinique at Greifswald. Appended to this description (*Berliner Klinische Wochenschrift*, Nos. 24, 25, 1878) is a statistical return of the cases of erysipelas treated during the past twelve months, together with a comparison of the results obtained during this period with those of earlier cases, the data being taken from the statistics contained in Dr. Schuller's annual report on the surgical practice of the Greifswald Hospital. After Professor Hueter had made out that bacteria were the carriers of erysipelatos inflammation of the skin, and had demonstrated the relation between erysipelas and diphtheria, it became necessary to remove this traumatic cutaneous affection from the list of acute exanthems in which it had been previously included, and to attach great importance, in dealing with this morbid condition, to a strictly local treatment. The erysipelatos rash was first treated, on this view, by the application of tar ointment, and with very good results; but this plan was soon superseded by the more effectual one of injecting subcutaneously near the margin of the erysipelatos rash a weak solution of carbolic acid. From practical experience of this method of treatment, it was found that subcutaneous injection of a three-per-cent. solution of carbolic acid proved capable of arresting the extension of an erysipelatos rash near the seat of puncture, but that the influence of the injected fluid did not extend over a wide area. When several injections were made near the margin of a spreading erysipelatos rash, the morbid process passed between the seats of injection in the form of narrow red streaks, which soon coalesced and surrounded well-marked islets of pale and unaffected skin. It was soon made out that, in order to obtain a completely successful result from the subcutaneous injection of carbolic acid, it would be necessary to submit every portion of the affected region of skin to the influence of this agent. If it were possible to inject subcutaneously the whole of the erysipelatos region, so that every portion of it would be saturated with a three-per-cent. solution of carbolic acid, the disease would be promptly and completely removed. In dealing with a widely spread eruption, however, such a plan of treatment would be attended with much difficulty, the surgeon having to consider the risks of carbolic acid poisoning, and the probability of much pain and suffering attending a multiplicity of injections. In order to obtain success from this plan of treatment it would be necessary, therefore, to establish the diagnosis of erysipelas at as early a stage as possible. The initial symptoms of traumatic erysipelas should be carefully looked for, and attention be at once paid to rigors, nausea, vomiting, and any change in the general condition of the patient. Rapidity in the appearance and extension of the erysipelatos rash bears a direct proportion to the severity of the initial symptoms. If there have been severe rigors, much prostration, frequent vomiting, and subsequently high temperature, an unmistakable erysipelatos rash will soon be observed near the original lesion; when, on the other hand, the initial symptoms have been mild, the rash will not make its appearance until after an interval of some hours. On the commencement of the rash of erysipelas, the original wound usually undergoes a change, the granulating surface presenting small grey patches, or being covered by a well-marked croupous deposit. In cases of this kind a solution of chloride of zinc (five to eight per cent.) should be applied to the open sur-

face. The whole of the surrounding erysipelatous region should then be thoroughly saturated with a three-per-cent. solution of carbolic acid, injected subcutaneously. When the rash is treated at its first appearance, and before it has extended far, two or three injections should suffice. In more advanced cases five or more applications of the injecting syringe will be required.

**TERRIER ON EFFUSION OF OIL AFTER FRACTURE.**—M. F. Terrier reports (*Revue Mensuelle*, No. 7, 1878) a case in which, two months after fracture of both bones of the right leg in a male, aged 28, and when the fragments had been firmly united, a small fluctuating and painless swelling was observed on the inner surface of the limb near the seat of injury. From this, when punctured, three grammes were drawn off of a thick fluid resembling olive oil, which contained no anatomical elements, and was found on chemical examination to be composed of margarine, a small proportion of oleine, and some traces of cholesterine. After repeated puncturing of this tumour, and application of firm pressure to its thick cyst-wall, all further effusion, towards the end of the eleventh week from the date of the first appearance, was quite arrested.

In some remarks on the pathology of this condition, M. Terrier states that it has been made out by those surgeons who have written on this subject that traumatic oily effusions, or rather traumatic effusions containing oil-globules, may be either primary or secondary. The effusion, when primary, is usually the result of rupture of the adipose vesicles of the subcutaneous cellular tissue. The tumour in such cases contains a serous fluid, more or less viscous, sometimes coloured by blood, and always mixed with oil-globules. A case, however, in which the primary traumatic effusion consisted almost wholly of oily fluid, has been reported by Gosselin. A young man presented, as the primary results of a fall, these three lesions, swelling of the left knee from intra-articular effusion, abrasions on the inner surface of the injured limb, and finally a small fluctuating tumour on the outer surface of the swollen knee. This tumour contained a thick fluid, which stained paper, and presented under the microscope very fine crystals of margaric acid. This oily effusion was very probably the result of crushing of adipose cellular tissue. Consecutive effusion of oil after injury may result either from gangrene of the cellular tissue, or from osseous suppuration. It was pointed out by M. Chassaignac that oil-globules are specially observed in the pus that results from inflammation of bone, and, according to this surgeon, the presence of such globules in purulent fluid is pathognomonic of osteo-myelitis. In M. Terrier's case, the situation of the collection of oil on the inner surface of the tibia at the junction of its upper and its two lower thirds, that is to say, in a region where the subcutaneous cellular tissue contains very little fat, seems to exclude any idea of crushing of the cellulo-fatty tissue as the cause of the tumour. Neither can it be attributed to osteo-myelitis; since the fracture had been a simple one, and the inflammatory results of the injury very mild. It is necessary, therefore, to find out some other origin of this oily effusion. According to M. Terrier, the oil was derived from the bone-marrow exposed by the fracture in the tibia, which, after passing between the fragments, collected under the skin, where, instead of becoming absorbed as is usually the result with such effusions, it formed a cystic tumour. Gosselin, in treating of compound fracture

of the leg, insists on this as a clinical fact, that the cutaneous wound gives passage not only to blood but also to oil-drops, the discharge of which may persist for ten or twelve days. This fluid comes from the bone-marrow exposed and broken down at the time of the injury, and in such case the abundance and persistence of the oily discharge serve to distinguish it from the discharge of a similar fluid that results from wounding of a part richly provided with adipose tissue. M. Terrier sums up as follows.

1. Effusion of oil may be observed as a result of breaking down of cellulo-fatty tissue, such collection being combined, in most instances, with a serous or sero-sanguineous effusion.

2. Gangrene of the cellular tissue and suppurative osteo-myelitis may give rise to purulent effusions containing oil-globules.

3. Pure oily effusions resulting from transudation of fat from bone-marrow may be the result of fracture, especially perhaps when this form of injury is multiple and direct.

W. JOHNSON SMITH.

**PERASSI ON SUCCESSFUL REMOVAL OF A LARGE THYROID TUMOUR BY EXCISION AND LIGATURE.**—In a paper read before the Royal Academy of Medicine in Turin (*Giorn. della R. Accad.*, May 1878) Dr. Perassi related (*à propos* of a case described by Dr. Bottini) a case which occurred to him in 1864.

The patient was a countryman, aged 46, who had an enormous goitre hanging down from the laryngeal region nearly as far as the umbilicus. The tumour was flattened antero-posteriorly, and was many-lobed; the skin over it was healthy, except at the infero-posterior part, where it was somewhat ulcerated, and presented large veins. The tumour, which had first appeared fifteen years previously, and had gradually grown to its present size, was not painful, but very inconvenient. The diagnosis of a large lipomatous bronchocoele having been made, it was removed on August 18, 1864.

An exploratory puncture was first made with a trocar, but without result. A long curvilinear incision was made along the front of the tumour, and a shorter one, also curvilinear, along its posterior aspect. The dissection of the flaps was very tedious and difficult, in consequence both of the induration of the deeper tissues, and of the arterio-venous vessels which were met with, and which, as a matter of precaution, were tied before being divided. Having reached the root of the tumour, Dr. Perassi found that it extended more deeply into the lateral regions of the neck than its appearance indicated, and that its extirpation by the knife would be attended with much danger. He therefore applied a series of partial ligatures, in which the whole mass of the tumour was included. Believing that the process of putrefaction of the tumour would be injurious, he cut it off a few centimetres in front of the ligatures. The edges of the wound were brought together, and a cooling ointment was applied. Healing went on favourably, with moderate suppuration, and the patient left the hospital cured at the end of a month. The portion of tumour removed weighed 5,550 grammes (about 12 lbs. 4 oz.).

A. HENRY, M.D.

**DELEFOSSE ON REMOVAL OF A PIECE OF IRON FROM THE BLADDER PER URETHRAM.**—Dr. Delefosse reports that in June he was consulted by a coachman who had introduced a piece of iron into his bladder. There was a good deal of pain,



and constant urination, this being augmented by a long walk taken to reach the surgeon's house. The patient was much depressed, and would not give much information about the foreign body, merely saying that the ends were not sharp, and that he had introduced it for the purpose of clearing the canal. He was placed in the recumbent position, and a curved metallic exploring sound was introduced into the bladder without difficulty, there being no contraction of its neck. A long smooth substance was then felt lying from left to right across the cavity of the organ, quite immovable. At first it was thought that extraction should be attempted through an opening made in the perinæum, but finally a lithotrite was passed, and at the end of half an hour one of the ends of the iron was seized and the foreign body withdrawn; this proved to be an iron carriage-pin, slightly curved, 9 centimetres (about  $3\frac{1}{2}$  inches) long, and with a diameter of 17 millimetres (6-10ths of an inch). There was no bleeding, and the next day the man resumed his work none the worse for his mishap.

**LANNELONGUE ON TUBERCULAR INFILTRATION OF LYMPHATIC GLANDS BETWEEN THE BLADDER AND THE RECTUM.**—At a meeting of the Parisian Society of Surgeons, held September 11, M. Lannelongue showed a specimen, taken from a young child that had died under his care, with symptoms of tuberculosis of the urinary track. At the onset, the child merely complained of sharp pain when voiding urine. Two explorations of the bladder failed to reveal a calculus. On examining *per rectum*, a soft fluctuating tumour was detected on a level with the prostate, which could be nothing else than a tubercular abscess surrounding the neck of the bladder. The patient died finally from purulent cystitis and consecutive nephritis. At the necropsy, there was found in the prostatic portion of the urethra a cavity, equal in size to a walnut, and lined by tubercular deposits. The loins were also infiltrated with caseous matter. But the most interesting lesion consisted in the presence of seven stones, each being of the size of a small pea, situated in the tissues which separate the rectum from the base of the bladder. One of these stones corresponded exactly to the opening of the ureter. Microscopical examination showed that these stones were caused by the caseation of true lymphatic glands. M. Lannelongue had made researches with regard to this anatomical point, and in another child, who had no lesion of the genito-urinary organs, he had found six glands, situated between the bladder and the rectum. To M. Lannelongue, the presence of these glands explained the formation of certain abscesses in the pelvic rectal space. An excoriation of the mucous membrane of the rectum, or a lesion of the urinary organs, set up an adenitis of these glands terminating in suppuration, which extended to the neighbouring cellular tissue.—M. Duplay confirmed the anatomical facts of M. Lannelongue; he had found these glands situated in front of the anterior wall of the rectum.—M. Lucas-Championnière stated that the facts communicated by M. Lannelongue reconciled those which he had himself noted upon the position of uterine lymphatics and the glands of the broad ligaments.—M. Desprès had watched an abscess in the superior pelvic rectal space of a robust individual. After an attentive observation he was fully persuaded that this abscess was caused by an adenitis. The patient had retention of urine as a first symptom.

T. F. CHAVASSE, M.D.

**HUET ON OPERATION FOR PHIMOSIS BY MEANS OF THE ELASTIC LIGATURE.**—Two communications to the Société de Chirurgie de Paris by M. Huet, of Rouen, on division of the prepuce by the elastic ligature, are noticed in *Le Progrès Médical* of May 11 and August 10, 1878. M. Huet operates as follows. The prepuce on its dorsal aspect and opposite the base of the glans is pierced by a needle carrying a caoutchouc thread; the portion of the prepuce in front of the puncture is then ligatured, and the operation is finished. At the end of three or four days section is completed. The patients do not suffer, and may, if necessary, continue their ordinary occupation.

The author states that he has seen the operation succeed in eighty cases, including both old men and children. The appearance of the parts after this mode of operating is said to be most elegant, and there is no fear of a scar. On August 7, M. Huet showed at the Société de Chirurgie four young soldiers treated as above, with most satisfactory results.

ARTHUR COOPER.

**ROXBURGH ON RUPTURE OF THE QUADRICEPS EXTENSOR TENDONS OF BOTH LEGS; OPERATION.**—Mr. Robert Roxburgh, in the *Lancet*, August 1878, p. 247, gives the history of a man, aged 64, who injured his legs in 1873 and again in 1874 by falls, since which period he had been nearly bedridden. On admission to the Edinburgh Infirmary on the 18th of May 1877, the exact nature of the accident was at once apparent. The skin above the level of each patella was loose and wrinkled, and the upper edge of that bone hung prominently forward, so much so, indeed, that the fingers could easily be pushed down in the fold of the skin between the patella and the femur, and the outline of the articular surface of the latter could be distinctly felt. When seated in a chair, with the knees at a right angle, he could not extend them even in the smallest degree; but if one of the legs were passively extended, he was able to maintain it, and even to hold it up in that position. If now the extended limb were slowly and gently flexed by the surgeon, it was seen that the power of bringing it back to the straight position remained till flexion had reached a certain point—viz., an angle of about 157 degrees—when the leg suddenly dropped with a slight crack, due to the few lateral fibres of the vasti muscles that remained unlacerated, and which were attached to the fascia lata and capsule of the joint, slipping over the tuberosities of the femur. Mr. Lister, on June 1st, freely exposed the injured muscle of the left limb, antiseptically, by a crucial incision, paring the torn edges and stitching them together with carbolised catgut. In separating the lacerated muscles from their deeper adhesions, the knee-joint and large bursa under the crureus were opened. Free drainage was established before the incisions were closed, a large gauze dressing applied, extending to the hip, and the limb bandaged to a well-padded posterior Gooch's splint. The temperature never rose above 99.6°, and, with the exception of a slight slough, due to pressure of a button suture, the progress of cure was uninterrupted, and on October 23 the patient left the hospital with the outline of the knee nearly normal. Lying on his back, he could raise the limb from the bed without difficulty, and could bend it to an angle of 110°. So conscious was the patient of the advantages gained by the left leg, that he would readily have submitted the right to similar treatment, had his age not ren-

dered a second operation of so serious a nature undesirable.

**MAUNDER ON CYSTIC SARCOMA OF LOWER JAW REMOVED BY THE MOUTH.**—Another of those operations that Mr. Maunder has devised for removing tumours of the lower jaw without leaving any external scar was performed February 19, 1878, and reported in the *Lancet* in July, p. 83, with woodcuts showing the results obtained. A Jewess, aged 50, had, ever since a young girl, noticed a small lump on the body of the lower jaw, to the right of the symphysis. Ten months before admission it began to grow, and on admission was so large as to cause Mr. Maunder some anxiety as to whether it could be extracted through the mouth, when freed from its connections. During extraction one angle of the mouth was torn to the extent of three quarters of an inch, notwithstanding that one of the cysts had broken and collapsed. This was the fourth case operated upon without external incision during the last eight years by Mr. Maunder in the London Hospital. Upon another occasion, if need be, the several cysts might be ruptured and the tumour removed piecemeal, so as to avoid the slight injury that occurred in this case to the angle of the mouth.

Mr. Maunder claims for this method of operating absence of hæmorrhage, the facial vessels not being wounded, avoidance of ligatures, non-interference with the muscles of expression, and consequently avoidance of paralysis and the deformity which results from division of branches of the facial nerves, and, lastly, the absence of a long unsightly scar.

**ALEXANDER ON THE REMOVAL OF NUMEROUS VILLOUS GROWTHS FROM THE FEMALE BLADDER.**—Dr. William Alexander, in the *Lancet*, August 1878, p. 209, gives the history of a female, aged 36, who, in 1868, suddenly, without apparent cause, began to suffer from vesical irritation, her urine becoming red, thick, and scanty. She came under Dr. Alexander's care in July 1876; and after four months' treatment, he advised a careful examination of the bladder, under chloroform. On passing the finger, *per urethram*, the vesical floor was found extremely rough and irregular. A few of the irregularities were a quarter of an inch in height; one seemed nearly an inch. The urethra was dilated by means of an anal speculum, a wire of an *écraseur* was passed round the base of the largest growth, which was readily removed, and many other of the smaller growths were easily detached by the finger nail. The bladder was washed out with a weak solution of perchloride of iron, and in two days the patient regained control of that organ. The pain on micturition became much less, her general health improved, and she was able, after four months, to resume her duties as cook. In October 1877, a complete relapse took place, and again, under anæsthetics, the bladder was cleared of about a dozen small arborescent growths by the finger-nail alone; very little hæmorrhage followed, and the patient quickly recovered. In May 1878, the operation was repeated, after which recovery was more rapid and complete than formerly, and the urine has remained healthy ever since.

**KEMP ON PHIMOSIS AS A CAUSE OF RUPTURE IN CHILDREN.**—Mr. J. Arthur Kemp, in the *Lancet*, July 1878, p. 119, brings forward fifty cases of congenital phimosis, in thirty-one of which rupture was found to be also present. In no one of the cases was the rupture noticed at birth, the earliest (a child

born with a very tightly constituted prepuce), was noticed three weeks after birth, the latest two years and a half. The explanation of the frequent association of the two affections, is that the straining exerted to overcome the difficulty of micturition, and the crying consequent on the pain caused in making the efforts, force the bowel through the weak abdominal parietes.

R. NEALE, M.D.

**GROSS ON SARCOMA OF THE PALM OF THE HAND.**—At a recent meeting of the Société de Chirurgie (*La France Méd.*, 1878, p. 253), M. Tillaux read a communication from Dr. Gross, of Nancy, giving an account of a peculiar growth which he had recently removed from the palm of the hand. The tumour was developed in the subcutaneous cellular-adipose tissue. The patient, a girl aged 17, had a tumour at the root of the right index finger, occupying the place of the adipose cushion usually situated there; it extended thence to the thenar eminence and the palm of the hand, forming a lower subcutaneous lobe and an upper lobe somewhat flattened by the aponeurosis. The tumour was painless, movable, and did not adhere to the deeper tissues. M. Gross hesitated in his diagnosis between lipoma and sarcoma. Microscopic examination of a piece of the tumour showed the presence of the latter. The tumour was removed by enucleation. Four or five days later an isolated process was observed in the wound, which gave rise to fears of a return of the disease. This was destroyed by caustic, and subsequently returned twice, finally disappearing entirely under the use of Canquoin's paste.

In the discussion which followed, M. Verneuil said he had long warned his pupils against the danger run in enucleating so-called "benign" tumours. Frequently the examination of a rounded encysted fibroplastic tumour would show a sort of serous sac about the periphery, a very loose cellular tissue. Enucleation is easily effected, but on examination of the cyst which surrounds the tumour it is found to be composed entirely of fibro-plastic elements. In these cases local relapses of the most stubborn character are to be feared. M. Verneuil was accustomed in such cases, as in fibromata of the mamma, often mistaken for adenomata, to remove the whole cellular "atmosphere" about the tumour, going into the healthy tissue beyond the suspected zone. M. Desprès said he thought the growth in M. Gross's case was connected with the bone.

**VAN BUREN ON THE CURE OF ANAL ABSCESS WITHOUT FISTULA.**—Dr. Van Buren (*New York Medical Record*) says:—There is no reason, therefore, why the abscess should not be opened so freely as to render any subsequent retention of pus impossible, and this is the condition on which prompt healing and escape from the formation of a fistula depend. I have little doubt, after the results I have seen from the antiseptic method, that if it were faithfully used in opening and dressing these abscesses, and accurate drainage secured by means of caoutchouc tubes or horse-hair, *healing without fistula would be the rule, instead of the rare exception, as at present*. The striking success of Volkmann, as set forth in his recently published operations upon the rectum, certainly justifies this hope. But even with the aid of antiseptics in insuring prompt repair, early and free openings cannot be dispensed with. . . .

What are the chances of cure, without fistula, of abscesses near the rectum or anus? Allingham's table (*Diseases of Rectum*, London, 1873), of 4,000



consecutive cases of rectal disease observed at St. Mark's Hospital (out-patients) includes 196 abscesses, with the remark added that, "of these 151 became fistulæ, and the rest were probably cured." This would give nearly twenty-three per cent., or about one in four, which I should consider somewhat too favourable prognosis. It remains for us to improve the chances of cure by our methods of treatment, and the points I have sought to make look to this end.

#### RECENT PAPERS.

- General Urticaria following the Use of Lister's Carbolic Acid Dressing. By Dr. O. Messerer. (*Eratisches Intelligenz-Blatt*, Sept. 17.)  
 Cancer of the Tonsil: Removal by External Incision. By Dr. D. W. Cheever. (*Boston Medical and Surgical Journal*, August 1.)  
 On some Tumours in Rare Situations. By Drs. Tizzoni and Parona. (*Annali Universali di Medicina e Chirurgia*, August.)  
 On Galvano-Cautic Operations. By Dr. Volkolini. (*Berliner Klin. Wochenschrift*, September 9.)  
 On Ozæna and a Simple Method of Treating it. By Dr. J. Gottstein. (*Ibid.*, September 16.)  
 A Certain, Easy, and Safe Method of Treatment of Permeable Stricture. By Dr. von Mosetig-Moorhof. (*Wiener Med. Wochenschrift*, August 17.)  
 The Pathology and Treatment of Genu Valgum. By Dr. O. Chiari. (*Ibid.*, September 7, 14.)

#### MATERIA MEDICA AND THERAPEUTICS.

STARCKE ON THE USE OF CHLORAL-HYDRATE ENEMATA.—Dr. Starcke, of Berlin, has a paper on the employment of chloral-hydrate enemata in the *Berliner Klinische. Wochenschrift* for August 19. He observes that there are great prejudices, especially in England, against the continued use of chloral, occasioned, probably, by the not unfrequent misadventures occurring in connection with its use in habitual drunkards. Last year Dr. Starcke himself fell ill of a chronic gastric catarrh, with great acidity of the contents of the stomach and considerable emaciation and prostration. The principal and most distressing symptom, however, was persistent insomnia, only half an hour to an hour's sleep being obtained at night. At the suggestion of his colleagues Dr. Starcke resorted to the use of chloral, but the irritable state of the stomach forbade its use by the mouth, and hence he determined to take it *per rectum*. An aqueous five per cent. solution of chloral was warmed to about 95° Fahr., of which he injected first 10 grammes, and after a quarter of an hour a further quantity of 10 grammes, so that in all 1 gramme (15½ grains) of chloral were thus taken. This was in a few minutes followed by a feeling of warmth, comfort, and repose, and lastly by sound sleep, which lasted uninterruptedly for five hours. In this manner Dr. Starcke continued the injection of chloral for five months, taking in all 120 grammes of the drug. Decided convalescence set in after almost the very first dose, which was followed every morning by a sense of vigour and a desire for food, without any headache or other discomfort. Nor did the efficacy of the dose of chloral diminish, and latterly even half the quantity, i.e., 0.5 gramme, was sufficient. Frequently the attempt was made to obtain sleep without resorting to the chloral, but in vain, until within the last month, when Dr. Starcke found he could discontinue it altogether. This employment of chloral *per rectum* has decided advantages in cases of gastric irritability. Dr. Starcke tried twice to take it by the mouth, and each time it was after a few

minutes completely rejected, and no sleep ensued. The absence of all unpleasant results when administered by the rectum is doubtless due to its undergoing no decomposition, as is generally the case when it comes into contact with the contents of the stomach. Of course the drug should be absolutely pure. The sensation of burning and tenesmus which at first follows an injection, may be materially obviated by well oiling the nozzle of the syringe. And since the site of the tenesmus is chiefly in the region of the sphincter, contact of the chloral solution with this part of the gut should be avoided by passing the injection pipe as high up as possible. And if the injection is made by oneself, the position on knees and elbows will be found the most convenient. It is also of consequence that the solution should be complete, and that it should be warmed to the temperature of the body; also that the dose required is a moderate and even small one as compared with that usually given by the mouth. Dr. Starcke has subsequently used chloral in the same way in various cases and with the same uniformly safe and favourable results. It seems especially applicable in the case of aged people, and in no case need the dose exceed one gramme (15½ grains).

W. J. TREUTLER, M.B.

MESSEMER ON COLD WATER ENEMATA IN CHRONIC DIARRHŒA.—Dr. M. J. B. Messemmer, of the Mount Sinai Hospital, New York, recommends, in the *American Journal of Medical Sciences* for July, the use of enemata of cold water in the treatment of chronic diarrhœa. He says that the idea suggested itself to him after treating some cases of dysentery by injections of cold water and opium, and of cold water alone. These, in his opinion, relieved the tenesmus and tormina by washing out the irritating substances; and he entertained the notion that, in chronic diarrhœa, the exciting cause might be removed, or at least mitigated, in the same way. He found, by experiment on himself, that the removal of irritating mucus or fæces by warm water did not prevent the stools from remaining watery; cold water, however, brought on constipation, which was easily removed by a cathartic. He believes that cold water, when injected, possesses astringent properties, and, when slowly injected, so as not to excite peristaltic action, protects the mucous membrane of the rectum by keeping the gut distended. He does not object to the simultaneous use of internal remedies, but considers diet as of the highest importance in aggravated cases. Three cases are related as examples of the treatment.

TAUBE ON THE TREATMENT OF DIPHTHERIA AND CROUP BY OIL OF TURPENTINE AND THE SUBMUCOUS INJECTION OF CARBOLIC ACID.—Dr. Taube, of Leipzig (*Deutsche Zeitschrift für Pract. Med.*, No. 35, 1878) confirms the experience of Dr. Edel (*New York Medical Record*, January 19) as to the beneficial effects of turpentine in croup and diphtheria; and recommends, in addition, cold applications to the neck, and submucous injections of carbolic acid. The turpentine is given by inhalation every hour, night and day. The carbolic acid is injected into the tonsils twice or three times daily, about half a morphia-syringeful of a three per cent. solution being used. In addition, one or two teaspoonfuls of port wine or Madeira are given hourly, and ice-bags are applied to the neck.

IODOFORM FORMULÆ.—The *Allgemeine Med. Central-Zeitung* for September 21 extracts from

No. 18 of the *Mittheilungen des Vereins der Ärzte in Neiderösterreich* some remarks on iodoform, and several formulæ for the use of this remedy.

Iodoform is given in doses of from 5 to 10 centigrammes ( $\frac{3}{8}$  to  $1\frac{1}{4}$  grain) three or four times daily, in solution in ether, in powder, or in pills. For ointment, one part of iodoform is mixed with eight or ten parts of fat at the temperature of a water-bath. Rubbed to a fine powder, it is used for sprinkling and dressing varicose ulcers, cancerous and syphilitic ulcers, anal fissure, etc. Mixed with lycopodium, it is used for insufflation in angina, and for sprinkling in the vulvitis of children.

*Righini's Iodoform Paper.*—Take of starch 20 parts, cold water 15 parts. Mix, and add 100 parts of boiling water, or enough to make a softish paste, to which add 10 parts of iodoform. The paste is then spread thinly on bibulous paper. The paper is used for disinfecting dwellings and sick-rooms; strips being laid in different parts of the room.

*Iodoformised Collodion* (Moretin).—Dissolve five parts of iodoform in 100 of collodion; mark "For external use." Used in arthritis and rheumatism.

*Iodoform Suppository* (Purdon).—Iodoform, one part; cacao oil, 25 parts. For application to the cervix or cavity of the uterus as an anodyne.

*Iodoformised Cod-liver Oil.*—Dissolve one part of iodoform in 200 of cod-liver oil, and add 0.5 of oil of aniseed. The dose is a tablespoonful twice or thrice daily in phthisis, glandular affections, and scrofula.

*Antirheumatic Pills* (Knoll).—Iodoform, reduced iron, each 3 grammes ( $46\frac{1}{2}$  grains); purified liquorice juice, enough to make 60 pills, to be sprinkled with lycopodium. Two to be taken three times daily.

*Antirheumatic Pills* (Purdon).—Iodoform,  $2\frac{1}{2}$  grammes, reduced iron, 1 gramme; liquorice juice, 4 grammes; water, sufficient to make 50 pills. Two or three to be taken every two or three hours in neuralgia and rheumatic affections.

*Iodoform Pills.*—Iodoform, extract of gentian, of each 5 grammes; gentian root (powder), sufficient to make 100 pills. From three to five to be taken twice or thrice daily in scrofula, amenorrhœa, and cancer.

*Ethereal Solution of Iodoform* (Gubler).—Iodoform, two parts; dissolved in spirit of wine, ether, of each 4 parts. To be painted over the painful parts in chronic arthritis, with a camel-hair pencil; the part to be afterwards covered in with oiled silk.

*Antihæmorrhoidal Suppositories* (Hillairet and Purdon).—Iodoform,  $2\frac{1}{2}$  grammes; cacao-oil, 40 grammes; yellow wax, 5 grammes. Mix at a gentle heat, and make ten suppositories.

*Iodoform Ointment.*—Iodoform, 5 parts; hog's lard, 45 parts; to be melted together at the temperature of a water-bath, and stirred until cool. To be marked "For external use". In pruritus, prurigo, chronic eczema, fissures, and painful ulcers.

**SUBCUTANEOUS INJECTION OF SCLEROTINIC ACID IN HÆMOPTYSIS.**—Sclerotinic acid, which, as is known, has been obtained by Dragendorff from ergot, is injected subcutaneously in hæmoptysis by Professor von Ziemssen, of Brussels (*Deutsche Med. Wochenschrift*, No. 34, 1878). He uses a solution of one part of the acid in 25 of distilled water, and injects a Pravaz's syringe twice or thrice in twenty-four hours. The effect is said to be more certain than that of ergotin. A. HENRY, M.D.

FAYRER AND CHRISTISON ON ÆGLE MARMELOS OR BÆL.—Sir Joseph Fayrer drew attention to the

great value of this Indian fruit in a short article in the *Medical Times and Gazette*, December 1877, p. 662, and suggested the feasibility of obtaining the fresh fruit from Bombay, in these days of rapid transit. This paper was followed by an exhaustive clinical lecture published in the same periodical, June 1878, pp. 611, 645, in which every information regarding the botanical history, therapeutic value, and different preparations of the drug is given. The medicinal virtues of the fruit are probably due to the astringent, aromatic, and demulcent properties of the pulp. It contains a considerable quantity of tannin, essential oil, balsam, and aromatic principle, in the pulp, in the rind, and in the tenacious mucus surrounding the seeds. All these may be preserved to a certain extent in the dried preparations, best known in this country, but the fresh fruit is in all respects better and more active. Sir J. Fayrer exhibited very fine specimens of the fresh fruit which had arrived in March, and were still quite fresh at the end of May.

The attestations to the value of the fruit, since Sir R. Martin brought it prominently forward in 1853, are numerous, all tell the same story, and declare it to be a valuable remedy in certain chronic diseased conditions of the *primæ viæ*; but by none is it regarded as a remedy for acute diseases. In chronic dysentery and diarrhœa, and especially in that obstinate form, "diarrhœa alba, white flux, or hill diarrhœa," great benefit is frequently derived from the use of fresh fruit.

Sir Robert Christison, in a letter to Sir J. Fayrer (*Medical Times and Gazette*, July 1878, p. 86) fully bears out all that has been said in favour of the fruit, and confesses himself to be a devoted "worshipper of Bæl", having found it to possess marvellous curative powers in several obstinate cases of diarrhœa. In Sir Robert's words, "It is an incomprehensible remedy. I had only the dry hard fruit to work with, and it has neither aroma nor taste—certainly no astringency. Nor do I think that chemical analysis has hitherto thrown any light on the source of its action—I mean of the dried fruit—for, of course, the fresh fruit is quite different in its sensible properties."

**LEESON AND PEPPERCORNE ON THE TREATMENT OF SEA-SICKNESS.**—Several papers upon this subject have appeared in recent medical periodicals.

Mr. J. Rudd Leeson, in the *Lancet*, July 1878, p. 120, advocates the use of nitrite of amyl, as originally suggested by Mr. Clapham in 1875. In Mr. Leeson's cases its effects were not so marked as in Mr. Clapham's; still, in three-fourths of his cases no vomiting occurred after the inhalation; in half the cases the patients felt all right after their sleep, and quickly reappeared at meals; in a fourth of the number, though the patients ceased to vomit, they complained of a feeling of sickness, which, with the throbbing and fulness in the head, left them little better than they were before. About a fourth part of the cases were not in any way improved.

Mr. F. Peppercorne, in the *Medical Times and Gazette*, July, p. 89, revives the belt treatment, which has found many warm supporters from time to time. A common elastic belt is firmly buckled round the waist, so as to press on the pit of the stomach.

[Mr. Levilly (*Lancet*, August 1853, p. 189) describes a belt, called by him the *Thalassone*, specially devised for this purpose, of which he gives a drawing, accompanying it by a review of the various theories advanced to explain the causes of sea-sickness, at the



same time explaining the *rationale* of the good results derived from the use of the belt.

Dr. Hastings, in the *Medical Times and Gazette*, vol. ii, 1867, p. 219, speaks most enthusiastically of a long bandage wound tightly round the abdomen over an epigastric compress.—*Rep.*]

**THORNLEY ON CARBOLIC ACID IN MOSQUITO-BITES.**—Dr. T. G. Thornley, in the *Lancet*, August 1878, p. 280, confirms the vast value of this agent as a preventive and curative of mosquito-bites, which Mr. De Berdt Hovell, in the *Lancet*, November 1873, p. 633, originally suggested.

**KERR ON LARGE DOSES OF BELLADONNA IN INTESTINAL OBSTRUCTION.**—Dr. Norman Kerr read a paper at the annual meeting of the British Medical Association, in which reports were given of five severe cases of intestinal obstruction successfully treated by two-grain doses of belladonna, every one or two hours, until from twelve to sixteen grains had been taken (*British Medical Journal*, August 1878, p. 307).

**CASE I.** Woman, aged 68; had no stool for nine days. She had stercoraceous vomiting, and was in apparent collapse. Two grains of extract of belladonna were given every hour; in eight hours there was copious relief from the bowels.

**CASE II.** Woman, aged 42, was seen twelve days after labour, since which no motion had passed. The abdomen was enormously distended; the patient had stercoraceous vomiting, and was apparently dying. After six two-grain doses of extract of belladonna she had copious relief.

**CASE III.** Man, aged 34; had had obstruction twelve days; his vomiting was stercoraceous, and he was thought to be moribund. After seven two-grain doses, the relief was perfect.

**CASE IV.** Woman, aged 78, had had no motion for thirteen days. One grain of extract of belladonna was given every hour, and after nine doses recovery was rapid. Subsequently she had two other attacks of constipation lasting eight and seven days respectively, which yielded to seven and five grains of extract of belladonna respectively.

**CASE V.** A female, aged 58, with old-standing umbilical hernia, had had four attacks of obstruction, all of which were rapidly cured with one-grain doses of extract of belladonna repeated hourly. The most effectual preventive of a return of the attack, Dr. Kerr finds to be the pulvis glycyrrhizæ compositus.

**HALL ON THE CLIMATE OF TORQUAY.**—In an address delivered by Dr. C. Radclyffe Hall at the annual meeting of the South-Western Branch of the British Medical Association, and published in the *British Medical Journal*, July 1878, p. 49, the merits and demerits of the climate of Torquay are concisely stated.

To mention Torquay is immediately to hear "Oh it is so relaxing", and this is, and yet is not, the fact. According as the wind blows so is the climate of Torquay, but, if by relaxing is meant a place where an ordinary healthy person feels less up to the mark than elsewhere, then the term does not apply to Torquay. All agree that any feeling of languor due to the climate of Torquay disappears in twenty-four hours after going a hundred miles inland, and leaves no diminution of strength or vigour behind. And it is not every person in health who complains of Torquay as proving relaxing. Those of robust sanguine temperament, who are apt to err on the

side of over-energy, find themselves in a state of happy and comfortable calm and quiet strength.

For pulmonary invalids, however, we want a safe, non-exciting climate, where the danger of exciting inflammation is at the minimum, and this we have at Torquay, which may be characterised as possessing a soothing and a safe climate. The moisture is all sea moisture, which for damaged lungs is a great desideratum, and makes one exclaim, "This is breathing made easy." For kidney diseases, for gout and its congeners, Torquay is unsurpassed; in a word, all ailments dependent upon chronic inflammatory irritation of any mucous membrane are benefited by Torquay climate.

On January 3, 1876, an unusually cold day, the thermometer at Cobham, in Surrey, showed 37 degrees of frost; at Bournemouth, 20 degrees; at Torquay only 7 degrees of frost.

RICHARD NEALE, M.D.

**VON BÖTTCHER ON THE HYPNOTIC ACTION OF SODIUM LACTATE.**—W. von Böttcher (*Berliner Klin. Wochenschrift*, 1877, No. 37) states that the effects of lactic acid as a hypnotic were tried upon 60 cases. The dose of the sodium salt varied from 8 to 15 cubic centimetres. Of these 60 cases, 39 gave negative, whilst 21 gave positive results. In seven of the 21 positive cases, the effect of the lactic acid was to give sound sleep after an hour's interval; in nine cases the ordinary sleep became deeper, whilst in others again there was an abnormal feeling of fatigue. The action was relatively more certain in young females when administered upon an empty stomach, and in the evening. There was no period of excitation before the advent of sleep, but the after effects upon the digestion were most unpleasant. Lactic acid is, therefore, to be considered as an untrustworthy hypnotic.

D'ARCY POWER.

**PORTER ON SANTONIN IN THE TREATMENT OF ASCARIDES.**—In the *American Journal of Obstetrics*, Dr. J. P. Porter says that santonin has been his unfailing resource in worms, and the longer he employs it the more implicit confidence does he place in it. His method is that adopted by the late Dr. John S. Parry (in whose service in the children's wards of the Philadelphia Hospital, he first saw santonin administered), viz., to give one grain for every year of the child's age, though seldom increasing the dose beyond five grains. He usually orders five powders made with an equal quantity of powdered sugar, which may be placed dry upon the tongue, and which children swallow with great avidity. One of these is to be taken every night and morning until all are gone, when a dose of castor-oil or other simple purgative is given. Heller recommends it in doses of from one-third to one-and-a-half grains, the latter dose only to grown-up persons; but these he thinks too small to get the full effect of the drug, and Heller himself acknowledges that, except in large doses, it is quite innocuous. Dr. Porter remembers one case in which he ordered it in doses of four or five grains, when the German druggist, to whom the prescription was taken, brought it back in great consternation, fearing that he had made some frightful mistake, and that the child would surely be killed if it took the medicine.

**ORTILLE ON THE TREATMENT OF OBSTINATE HICCUGH BY PILOCARPINE.**—Dr. Ortille, of Lille (*Bull. Général de Thérap.*, 1878), gives an account of a case of obstinate hiccough, in which, after trying all the usual remedies, he had recourse to electri-

city. For a few hours the application appeared to prove successful; but the hiccough returned. Remembering what he had read of the action of pilocarpine upon the phrenic nerves and of the vomiting which often follows its use, he injected two-fifths of a grain of pilocarpine under the skin. The effect was almost instantaneous. A quarter of an hour after the injection the patient was covered with sweat, salivation was established, and the hiccough had definitely ceased.

**THOMAS ON LOWERING THE HIGH TEMPERATURE AFTER OVARIOTOMY.**—In a paper published in the *New York Medical Journal* for August, Dr. T. Gaillard Thomas recommends, in order to lower the temperature after ovariectomy, the use of Kibbee's fever-cot. It consists of a frame supporting strong, elastic, cotton netting, manufactured for the purpose, through which water readily passes to the bottom below, which is of India-rubber cloth, so adjusted as to convey it to a vessel at the foot. When not in use it can be closely folded (see LONDON MEDICAL RECORD, March 15, 1877, page 128). The method of management is the following. Upon the cot a folded blanket is laid so as to protect the patient's body, and at one end is placed a pillow covered with India-rubber cloth, and a folded sheet is laid across the middle of the cot about two-thirds of its extent. Upon this the patient is now laid, and her clothing is lifted up to the arm-pits and the body enveloped by the folded sheet, which extends from the axillæ to a little below the trochanters. The legs are covered by flannel drawers and the feet by warm woollen stockings, and against the soles of the latter bottles of warm water are placed. Two blankets are placed over her, and, turning the blankets down below the pelvis, the physician takes a large pitcher of water at from 75° to 80° and pours it gently over the sheet. This it saturates, and then, percolating the network, it is caught by the India-rubber apron beneath, and, running down the gutter formed by this, is received in a tub. Water at higher or lower degrees of heat than this may be used. As a rule, it is better to begin with a high temperature, 85° or even 90°, and gradually diminish it.

The patient now lies in a thoroughly soaked sheet, with warm bottles to her feet, and is covered up carefully with dry blankets. Neither the portion of the thorax above the shoulders nor the inferior extremities are wet. The water is applied only to the trunk. The first effect of the affusion is often to elevate the temperature (a fact noticed by Currie himself); but the next affusion, practised at the end of an hour, pretty well brings it down. It is better to pour water at a moderate degree of coldness over the surface for ten or fifteen minutes, than to pour a colder fluid for a shorter time. The water slowly poured robs the body of heat more surely than when used in the other way. The water collected in the tub at the foot of the bed, having passed over the body, is usually 8° or 10° warmer than it was when poured from the pitcher.

At the end of every hour the result of the affusion is tested by the thermometer; and, if the temperature have not fallen, another affusion is practised, and this is kept up until the temperature comes down to 100° or less.

The patient lies constantly in a cold wet sheet; but this never becomes a fomentation. Dr. Thomas has kept patients upon the cot, enveloped in the wet sheet, for two and three weeks without discomfort to them and with the most marked control over the

degree of animal heat. Ordinarily, after the temperature has come down to 99° or 100°, four or five hours will pass before affusion again becomes necessary.

**PHARES ON POSTURE IN THE TREATMENT OF COLIC.**—Dr. D. L. Phares, in the *Transactions of the Mississippi State Medical Association*, 1878, directs attention to the mechanical treatment of colic. This consists in simply supporting the patient in an inverted position—in other words, in standing him on his head. In some instances, cases that have for hours or days resisted all ordinary treatment, have by this simple means been relieved and permanently cured in from one to five minutes. Cases, attended with most intense pain, vomiting, and other phenomena of so-called "bilious colic", have been thus cured. Relief is sometimes obtained by the "knee-breast" position, or by suspending the body by means of the thighs and legs extended across a high bed or table, the arms and hands being free to assist in giving comfort to the head. But complete inversion is the more sure and prompt remedy.

The majority of cases of colic result from mechanical influences, and it is but reasonable to seek relief in mechanical counter-influences. Several very distressing cases are remembered as being instantly cured in the inverted position, solely, as the patient averred, by the escape *per anum* of a single small bubble of gas, without explosive noise. Other cases of most agonising character have been instantly and permanently cured by a change of position of gas in the bowel, effected so quietly as barely to be noticed by the patient.

Often the pain vanishes the instant the vertical position is assumed, and does not return so long as this posture is maintained. But relief is not usually permanent unless some movement of gas be felt. Such movement may be perceived by the patient very promptly, or one minute or more may elapse; rarely no movement at all is perceptible, and yet the relief may be complete.

This treatment is not presented as infallible in all cases; from the very nature of the obstructions, it is reasonable to expect some failures.

**HARRINGTON ON HYPODERMIC INJECTIONS OF MORPHIA.**—Dr. H. L. Harrington lays down the following rules, in the *Chicago Medical Journal and Examiner*. 1. Never use hypodermic injections of morphia except for the relief of intense pain, or where the stomach will not retain the drug. 2. Have a solution accurately prepared, so that the *exact* amount given is, in every instance, known. 3. As morphia and pain are mutually antagonistic, and as it is well known that far larger doses are tolerated when pain is present, make the size of the dose proportionate to the severity of pain. 4. Do not leave the patient until sure that no unpleasant effects will follow.

**CHLORAL PLASTER.**—This (*Medical and Surgical Reporter*) is made by sprinkling pulverised chloral on a Burgundy pitch plaster, one or two grammes on a plaster four inches square. It produces small vesicles when left on twenty-four to forty-eight hours. Its use is praised in lumbago, pleurodynia, intercostal neuralgia, etc.



## RECENT PAPERS.

The Action of Digitalis, especially on the Circulation. By Dr. G. Cavazzini. (*Annali Universali di Medicina e Chirurgia*, Aug.)  
 The Treatment of Scrofula by Tayuya. By Dr. L. Alpago Novello. (*Giornale Veneto di Scienze Mediche*, July.)  
 On Acute Poisoning by Saponin, and the Use of Saponin as a Local Anæsthetic. By Dr. F. Keppler. (*Berliner Klin. Wochenschrift*, August 12, 19, 26.)  
 On the Therapeutic Value of Salicylic Acid and Salicylate of Soda in Medicine. By Dr. Bartels. (*Deutsche Medicin. Wochenschrift*, August 10, 17, 24, 31.)  
 The Use of Pilocarpin in Diseases of the Eye. By Dr. E. Fuchs. (*Wiener Med. Wochenschrift*, September 14, 21.)  
 Apomorphia in Croup and Acute Laryngitis. By Dr. Smidowitch. (*St. Petersburg Med. Wochenschrift*, September 2 (14).)

## OBSTETRICS AND GYNÆCOLOGY.

GOODELL ON A CASE OF SPAYING FOR FIBROID TUMOURS OF THE WOMB.—In the *American Journal of the Medical Sciences* for July 1878, Dr. William Goodell relates the following case in which he performed "Battey's operation". A. B., aged 33, a literary maiden lady, began twelve years ago to suffer from menorrhagia and dysmenorrhœa. In 1875, excruciating pain, in the left ovarian region, set in about a week after each period. Worn out at length by loss of blood and pain, she consulted Dr. Goodell. On examination, a subperitoneal fibroid tumour of the uterus was discovered. Various remedies for the restraint of the hæmorrhages were tried in vain. Drs. Goodell and Weir Mitchell finally decided upon removing both ovaries *per vaginam*. The patient lying on her side, and a duck-bill speculum being introduced, Dr. Goodell seized a fold of the post-cervical mucous membrane, and divided it with a pair of Kuchenmeister's scissors to the extent of about an inch and a half. In like manner, he snipped open the peritoneum, passed in his left index finger, and hooked down an ovary by the sling formed by the oviduct. The stalks of the ovaries were transfixed with double fine silk threads, and securely tied. The ovaries were then removed, the ligatures cut off at the knots, and the stumps returned into the pelvic cavity. The right ovary was healthy, but the left contained a small cyst. The loss of blood was trifling; no vessel needed tying, and no sutures were put in the vaginal wound. Following this operation, all the suffering and pains which had embittered her menstrual life, disappeared. For two weeks there was a slight oozing of blood from the vagina. She has not passed a single day in bed since her convalescence from the operation, and practically is wholly cured of her disorder. In discussing the advisability of the operation, Dr. Goodell gives it as his opinion that, in cases where the tumour is inaccessible to surgical treatment, the enucleation of both ovaries is the best treatment. He contrasts the frightful mortality after removal of the womb for fibroid tumour with that after spaying, from which operation all the recorded cases have recovered.

DIETERICH ON A CASE OF ATRESIA UTERI GRAVIDI.—In the *St. Petersburg Medicinische Wochenschrift*, Dr. J. von Dieterich describes a case of atresia uteri gravid occurring in the eighth pregnancy from cicatricial closure of the os uteri. The patient, a peasant woman, had had six children under perfectly normal conditions. At the seventh labour a doctor had to be called in to incise the os, which did not dilate, owing to cicatricial changes. In her eighth confinement, Dr. Dieterich was called, and

found the os uteri almost completely closed by cicatricial structures. There was only room to pass an elastic catheter. Dr. Dieterich made radiating incisions in the os, and, about 9 P.M. the next morning he found the os no more dilated than he had left it in the evening, when he could pass his finger. He enlarged the incisions and gave ergot. In a few hours after these proceedings a live male child was born. The recovery was rapid, the lying-in normal.

TALAMON ON A CASE OF TUBERCULAR PELVIC PERITONITIS WITH TUBERCLE OF THE OVARIES AND SUPPURATIVE ENCYSTED METRITIS, IN A GIRL AGED SIX YEARS.—In the *Annales de Gynécologie*, June 1878, Dr. Ch. Talamon relates the following rare case. Marie T., aged 6, was admitted under Dr. Triboulet, to the Sainte-Eugénie Hospital, with symptoms of tubercular meningitis. There was found, also, consolidation of the lungs at both apices. No symptoms drew attention to the abdomen, which was flat, excavated, and flaccid, as usual in tubercular peritonitis. The meningitis ran its course, and at the end of six days the child was seized with convulsions, and died. At the necropsy the usual appearances were found in the brain, and tubercular consolidation of both apices of the lungs. In the intestine, all the Peyer's patches were the seat of irregular ulcerations. The uterus was three times its normal size, and contained a clear green viscid fluid, like muco-pus; its cervical orifice was closed by tubercular ulceration. The Fallopian tubes were obliterated. The two ovaries were surrounded by thick caseous exudation. On removing these exudations, the ovaries appeared indurated, irregular, and enlarged to the size of the ovaries of a young adult. On section, they were found to be entirely changed into yellow cheesy matter. The microscopic examination revealed miliary nodules on the external surface of the ovaries. The portions of the tubes adjacent to the ovaries presented tubercular degeneration of the mucous membrane, whilst the uterine ends of the tubes remained normal.

PUECH ON OVARIAN PREGNANCY.—In the *Annales de Gynécologie* for July 1878, Dr. Albert Puech, after quoting six cases of ovarian pregnancy, draws from them the following conclusions. 1. Ovarian pregnancy takes place, but up to the present time it has been rarely observed. 2. Most of the cases described under the heading of ovarian pregnancy have been dermoid cysts, ovario-tubal pregnancies, or abdominal pregnancies in which the placenta has become attached to the ovary. 3. The anatomical conditions found in an ovarian pregnancy are: *a*. Absence of the corresponding ovary; *b*. Union of the fetal sac to the womb by the ligament of the ovary; *c*. Presence of ovarian structures in the walls of the sac; *d*. Independence of the Fallopian tube as regards the formation of the fetal sac. 4. There are two varieties, according as the foetus is developed in the vesicle which has remained open, or in a vesicle which has closed immediately after fecundation. 5. The progress and termination of ovarian pregnancy do not materially differ from those of abdominal pregnancies. 6. Laparotomy is the only rational treatment when the pregnancy has arrived at term.

FREEMAN ON THE TREATMENT OF UTERINE FIBROID BY ELECTROLYSIS.—In the *Proceedings of the Medical Society of the County of Kings* for July, Dr. J. N. Freeman describes the following case.

if it had not been described by others, it was probably because the attention of ophthalmologists had been principally directed towards the intra-ocular extremity of the optic nerve, the retina, and the ciliary processes.

Dr. Del Monte reviewed the opinions held as to the pathology of glaucoma, and expressed his belief that the increase of intra-ocular pressure is not due to accumulation of aqueous humour or of fluids which should escape from the eye; since clinical experience proves that the occlusion of the channels of diffusion proceeds *pari passu* with a diminution in the production of the fluids. The slow reformation of the anterior chamber after iridectomy, especially in chronic glaucoma, sufficiently proved this.

From an anatomico-pathological point of view, the author said, it is demonstrated that in glaucoma there is a slow process of sclerosis of the anterior uveal tract and of the cornea; and this can only be the result of stasis, as in analogous lesions of other parts of the body. The author believed that the stasis, which is the primary condition of glaucoma, is in the lymphatics rather than in the blood-vessels; since, in cases of vaso-motor paralysis in which there is retarded circulation, the intra-ocular pressure is diminished rather than increased.

A. HENRY, M.D.

#### RECENT PAPERS.

Tarsitis Syphilitica: Gummy Infiltration of the Tarsus. By Dr. C. S. Bull. (*New York Medical Journal*, September.)

On Simple Chronic Catarrh of the Mucous Membrane of the Tympanum. By Dr. D. Barcellini. (*Lo Sperimentale*, August.)

A New Polypotome for Aural Polypi. By Dr. G. Sapolini. (*Annali Universali di Medicina e Chirurgia*, August.)

#### MEDICAL CHEMISTRY.

ORD ON A RENAL CALCULUS LARGELY COMPOSED OF INDIGO.—Dr. William Ord gives a clinical lecture in the *British Medical Journal*, July 1878, p. 132, upon a case of Dr. Bloxam's, in which there was found an encysted calculus in each kidney. The patient had died of malignant disease. The calculus, in the left kidney, which was reduced to a lobulated cyst by sarcoma, was largely composed of carbonate of lime. In the pelvis of the right kidney, which was enlarged, but otherwise healthy, lay a flat blackish cake, like a fruit lozenge, seven-eighths of an inch long, nine-sixteenths broad, and one-tenth thick, of a consistence of very hard chalk or slate.

A careful examination proved that the calculus consisted of a matrix of phosphate of lime and magnesia, with a little remains of a blood-clot; that the matrix was everywhere interpenetrated with indigo-blue, with a little indigo-red; and that the indigo-blue formed a large proportion of the incrustation around the nucleus.

According to Schunk, indigo-blue is developed in urine containing indican, a colourless material, by the agency of acids, when the indican is broken up into indigo-blue and indigluin. The existence of indigo-blue in the urine has been long observed. Dr. Hassall, more than twenty years ago, pointed out the general chemical agreement between the colouring matter of the urine, indigo, and blood-pigment. Indol, a substance that may be obtained from the decomposition of albuminous substances, is one of the results of the action of the pancreatic juice on

peptones, and is found in the fæces, which, Baeyer supposes, owe their odour to its presence. Jaffé has found that indol, injected hypodermically, is followed by a great increase of indigo in the urine. In many diseases indigo is found in the urine. Dr. Ord, with Mr. Seymour Taylor, have already set to work to elucidate the cause of the formation of indigo-blue in the system, and hope ere long to lay the result of their observations before the profession.

RICHARD NEALE, M.D.

BÖHM AND HOFFMANN ON THE BEHAVIOUR OF GLYCOGEN AFTER ITS INJECTION INTO THE CIRCULATION.—R. Böhm and F. A. Hoffmann (*Archiv für Exper. Pathol.*, etc., Band vii, p. 489) show that blood-stained urine was voided by a cat after from 3 to 10 grammes of glycogen had been injected in the course of a few hours into the jugular vein. Glycogen is consequently one of the substances which cause a breaking up of the blood-corpuscles. The plane of polarisation is rotated to the right by the urine, from which the albumen has been removed; it also reduces cupric oxide, though the reduction is five to ten times smaller than is indicated by the rotation. The substance causing the rotation can be isolated, by precipitation with a large excess (6 to 8 volumes) of alcohol, at 95 per cent. The precipitate dissolves in water without opalescence, is not coloured by iodine, and does not answer to Fehling's test; but it is entirely converted into grape-sugar by prolonged boiling with acids. The authors assume 194.3° as the average amount of rotation of the plane of polarisation; whilst for an average of seven experiments with glycogen, the value was somewhat greater, 226.7°. The substance, therefore, which appears in the urine after the injection of glycogen, is achroo-dextrin, not unchanged glycogen.

#### SOLERA ON A PECULIAR REACTION OF SALIVA.

—L. Solera publishes the following note in the *Rendiconti del Reale Istituto Lombardo*, 1877, Serie 2, Tom. x, p. 371. Human saliva, whether filtered or not, whether fresh or kept for some time, possesses the power of reducing iodic acid. Saliva in presence of iodic acid becomes yellow, the colour being due to the liberation of free iodine. This reaction depends upon the presence of potassium sulphocyanide which it contains; a weak dilute watery solution of potassium sulphocyanide gives exactly the same reaction with iodic acid as does saliva. This reaction is marvellously delicate, to such an extent that the author is able to detect so small a quantity as 0.000004 gramme of the substance. None of the other salts which, according to the analyses of Frerichs, Jacobowitsch, and others, are present in the saliva, give this reaction, nor do the organic parts, viz., the mucus and ptyaline.

D'ARCY POWER.

PIFFARD ON A NEW GLYCOSURIC AGENT.—Every one knows (says the Editor of the *Dublin Medical Journal*) the uncertainty of Trommer's test and the bother of Fehling's solution. Dr. Piffard, of New York, states (*New York Medical Record*, 23rd March) that the following will be found a convenient substitute.

Take of sulphate of copper (chemically pure), 1 part; crystallised tartrate of soda and potassa, 5 parts; sodic hydrate (chemically pure), 2 parts. Mix thoroughly in a mortar; the more labour spent on this, the better the product. The result will be a pasty mass, which can be transferred to a wide-mouthed bottle and kept till wanted. To use it, take a



Miss O., aged 35, had suffered from profuse menstruation for fifteen years. There was a fibroid tumour in the right anterior wall of the uterus, nearer the peritoneal than the mucous surface. The uterine cavity measured five inches and a half. The patient having been placed under ether, Dr. Freeman took a large sail-needle, curved at the pointed end and insulated to within an inch of the point, passed it through the cervical canal, and thrust it into the tumour. It was connected with the positive pole of the battery. A straight round needle, similarly insulated, was thrust through the abdominal wall into the tumour. It was connected with the negative pole of the battery. A current from sixteen cells was turned on for fifteen minutes. This operation was repeated on Jan. 2nd, Jan. 9th, Feb. 6th, Feb. 12th, March 6th, March 12th, and April 3rd, 1877, in all eight times. On June 8th, 1878, only a trace of the tumour could be found. Her health is nearly restored.

BRADFIELD ON VAGINISMUS IN RELATION TO INSANITY.—In the *New York Medical Record*, May 1878, Dr. T. N. Bradfield relates a case, in which vaginismus was diagnosed as insanity. Miss J., aged 38, had suffered from dysmenorrhœa during the last six years. She became melancholic and subject to frequent fits of weeping, and an intense dislike for social intercourse. The family physician, without inquiry into the condition of the pelvic organs, diagnosed her disease as "a clear case of insanity"; urging that the "poor lunatic" should be immediately removed to an insane asylum. Dr. Bradfield was called in, and on examination found her suffering from vaginismus. He dissected away the hymen, broke down the fourchette with his hand, and ordered a Sims's largest vaginal dilator to be worn. With this treatment, and the frequent use of vaginal injections, the patient was discharged cured at the end of the fifth week. Thirty-two months after the operation, Miss J. visited Dr. Bradfield in perfect health.

FANCOURT BARNES, M.D.

VRAIN ON SKIN-ERUPTIONS DURING PREGNANCY.—Dr. Vrain (*Thèse de Paris*, May 1878) says that "during the whole puerperal period, including gestation, accouchement, and lactation, lacteal diathetic affections tend to recur if not to originate". He gives three cases of skin-disease, originating during pregnancy, all apparently impetigo or eczema impetiginodes, but in no case did the disease disappear after that period was past.

[There is something more to be made of the subject; we have seen frightful general urticaria persisting through the whole period of gestation and lactation, and disappearing when the mother could be persuaded to wean the child.—*Rep.*]

ROBERT SAUNDY, M.D.

HUGHES ON MULTIPLE TAPPING IN OVARIAN DROPSY.—Dr. Thomas Hughes, in the *Lancet*, July 1878, p. 137, reports a case in which paracentesis had been performed four hundred times during the course of twenty years. The peculiar interest of the case lies in the fact that the patient generally performed the operation upon herself, living, as she did, a great distance among the Welsh mountains away from her medical attendant.

R. NEALE, M.D.

## RECENT PAPERS.

- The Hæmorrhagic Diathesis in its Relation to Gynæcology. By Dr. E. Börner. (*Wiener Medizin. Wochenschrift*, Aug. 17, 31; Sept. 7, 14, 21.)  
 The Treatment of Uterine Fibroids with Galvanism by Profound Puncture. By Drs. Kimball and Cutler. (*Ibid.*)  
 On the Utero-Placental Murmur, and an Intravaginal Auscultation in Early Pregnancy. By Dr. F. Verardini. (*Giornale Veneto di Scienze Mediche*, July.)  
 Submucous Uterine Fibroid Treated by Electrolysis. By Dr. G. H. Bixby. (*Boston Med. and Surg. Journal*, Sept. 3.)

## OPHTHALMOLOGY AND OTOLOGY.

FIELD ON IVORY EXOSTOSIS IN BOTH EARS.—Mr. George P. Field relates in the *Lancet*, July 1878, p. 81, the case of a medical man, aged 32, in whom an exostosis filled each meatus, and pressed on the opposite wall, so causing inflammatory action. By the aid of the American dental drill, Mr. Field removed the growth first from the right ear and then from the left, with the result that the patient quite regained his hearing powers, after being in the aggregate seven hours under chloroform and ether.

[A very interesting account of a case and its treatment by galvanism is given by Mr. Dalby in the *Lancet*, vol. i, 1876, p. 127. Dr. T. E. Clarke was the operator. Three needles were introduced into the base of the tumour, and through these a current from six pairs of Stohrer's battery was passed for three minutes. In a fortnight this was repeated, and three weeks later the growth was so loose as to be readily removed. In a subsequent case, under Mr. Dalby's own care, paralysis of the facial muscles followed, either as an immediate consequence of the galvanic current, or from irritation of the tympanum set up as a result of the operation; and although Mr. Dalby has been, in other cases, very successful with the electric current, he now prefers the American drill as being free from such results as arose in the case alluded to.—*Rep.*]

RICHARD NEALE, M.D.

DEL MONTE ON THE PATHOLOGY OF GLAUCOMA.—In a communication read at the meeting of the Italian Ophthalmological Association in September 1877 (*Annali di Oftalmologia*, Anno vii, Fasc. 1), Professor Del Monte described the appearances found in a glaucomatous right eye which he had removed from a lady aged 65. She had undergone iridectomy in the left eye on account of commencing glaucoma, and the right eye was removed in consequence of the persistence of pain in it.

A microscopic examination made after the two halves of the eye had been preserved twenty days in alcohol, presented the following appearances. The ciliary processes were very small, their tissue having a fibrous aspect, with scattered cellular elements; and above their pigment the ciliary portion of the retina was observed to be adherent. The ciliary muscle was very slender; there was no trace of the canal of Schlemm, and the iris was adherent for a considerable extent to the inner surface of the cornea. On the anterior surface of the iris a small streak of newly formed connective tissue was observed. The author called attention to a layer of connective tissue interposed between the epithelium and Bowman's membrane; the latter had disappeared from part of the periphery of the cornea, leaving only the connective tissue. The author believed that he was the first to observe this change;

piece about the size of a pill, put it in a test-tube, and add about two fluid drachms of water; boil till the mass is dissolved, and the solution has an uniform pale and rather dirty blue colour; then add two or three drops of the suspected urine, and boil again for a moment. If sugar be present, the usual reaction will be manifest. The mass may conveniently be made into pills of proper size, one pill being sufficient for a test.

## REVIEWS.

*Contributions to the Physiology and Pathology of the Breast and its Lymphatic Glands.* By CHAS. CREIGHTON, M.B., Demonstrator of Anatomy in the University of Cambridge. London: Macmillan and Co. 1878.

In this work, Mr. Creighton considers the breast in its physiological and pathological aspects. In his researches, the mammæ of the cat, dog, rabbit, and guinea-pig, have chiefly been examined. The structure of the fully expanded gland is first described, both in its macroscopic and microscopic appearances. Omitting the former, we find, on microscopic examination, that each lobule is made up of a number of round acini grouped round the ducts, and separated by delicate bands of connective tissue. The floor of each acinus is covered by a single layer of polyhedral epithelial cells, varying in number from fifteen to twenty. Each epithelial cell has a central round nucleus about one-third of the entire breadth of the cell, and staining more deeply than the surrounding protoplasm.

In the involuted gland, we find that the acinus is reduced in bulk to about one-fourth of the evolved one. The epithelial cells lining it are reduced in number to about six, and form an irregular mass of nuclei. The most interesting appearances are found, however, in the glands examined for the purpose of tracing the entire course of the gland-involution. The acini have, there, no mosaic of epithelial cells, but, instead, a number of deeply stained cellular bodies with delicate unstained rings of a greyish colour. In many cases this produced cells like a signet ring, the cellular stained bodies corresponding to the stone of the ring.

From a consideration of these facts, of which we have given this brief sketch, Mr. Creighton holds that the formation of milk is brought about by a vacuolation of the successive generations of epithelial cells lining each acinus; or, to put it more strongly, by endogenous cell-formation. By this method a young cell and a vacuole containing fluid are produced; whereas, in cell-multiplication by fission, the parent cell breaks up into young cells varying in number.

The periodical subsidence of the function of the breast is accompanied by the production of cellular waste material in the shape of lymphoid cells and large yellow pigmented cells; both still, however, formed, according to the author, by the same process of vacuolation already described. This production of waste material is apparently due to the fact that, as the mamma decreases in functional activity, we get cells less perfectly formed to begin with, and retrograding into the waste material described above. Similar crude products, however, are formed when the mammary function is reviving.

At the end of periodical mammary activity there is what may be termed a resting cell corresponding to the

waste products. As the mammary activity revives, there is successive generation of more perfectly formed cells, all tending in the direction of the polyhedral epithelium, described at the beginning of this summary. These so tend, owing to the directing power of the now functionally active gland. When the cells have reached this stage, we get the process of endogenous cell-formation going on to the formation of milk.

The relation of the lymphatic glands to the waste products is now considered. The most characteristic and easily detected of these products, for obvious reasons, is the yellow pigmented cell. Such cells were found in the lymph-sinuses of the lymphatic glands connected with the mammæ. Across these lymph-sinuses, there stretch delicate bands whose exact nature is still disputed. Mr. Creighton considers carefully the various explanations given by Ranvier and others, and comes to the conclusion that the yellow pigmented cells become entangled in the mesh-work of the lymph-sinus, and thus lose their pigment, while the follicular tissue may reduce others of them to the position of nuclei. In this way, the waste products of the mamma are, according to this theory, changed in its special lymphatic glands and sent out on a new career, adding to the white blood-corpuscles, and, accordingly, contributing to the leucocytosis of pregnancy.

Development is next considered; and it is asserted that the mammæ are developed at many separate points in a matrix-tissue, and that the embryonic cells from which they develop are of the same kind that give rise to the surrounding fat-tissue. The ducts develop from the same matrix-tissue by direct aggregation of embryonic cells along predetermined lines; and the ducts develop (in the individual guinea-pig) before the acini, just as, to borrow Herbert Spencer's analogy, roads and streets may be laid down before the houses of a city are built.

The last part of this work is taken up with the consideration of the application of the previous researches to the pathological states of the breast. Detailed descriptions of various mammary tumours in the dog, cat, and human female are given, and attempts are made, not to classify them, but to reason out their starting point. Thus, in the bitch, the commonest indication of commencing disease was the presence of the large yellow pigmented cells already described under waste products. From some exciting cause, a spurious evolution of the breast has been started with a disastrous result, the indefinitely prolonged development and crude material laying the foundation of a tumour.

In the last chapter, the question of infection of lymphatic glands from the mammary tumour is considered.

Mr. Creighton's book bears throughout evidence of careful research by a highly competent investigator; and, even though subsequent inquiries may lead to a modification of some of his statements, it must for some time to come possess very great interest for the histologist and pathologist. J. C. EWART.

*The Antagonism of Therapeutic Agents, and what it teaches.* Prize essay. By J. MILNER FOTHERGILL, M.D. Pp. 150. London: Macmillan and Co. 1878.

Why therapeutic agents? Why not medicines? for the essay does not deal with other agents, unless a few paragraphs on Heat add to its title. But, not



to be too critical, it brings together many useful observations on a most interesting subject, which, "the youngest born of the therapeutic family, already promises to be one of the most active and vigorous."

The first chapter deals with "Experimental Inquiry". Preyer (1870) is credited with one of the earliest of modern investigations of antagonism, viz., that of belladonna *versus* prussic acid. Bartholow's negation of this is mentioned, but not the work of Boehm, Lecorché, or Meuriot, or Keen, or Preyer's answer (*Archiv für Experimentelle Pathologie*, vols. 2 and 3), but we suppose the negative is sustained. Frazer's experiments, which establish the antagonism of Calabar bean and atropia, are given in some detail; but as his method of procedure has been published several years we need not here reproduce it, admirable though it be.

The work of the Edinburgh Committee and Dr. Hughes Bennett is next summarised, giving satisfactory proof of antagonism between chloral and strychnia. "Take two rabbits of about 3 lbs. weight; inject under the skin of both one ninety-sixth of a grain of strychnia, and then in one a solution of fifteen grains of chloral. In ten minutes, the one will leap into the air and fall down tetanic and dead; the other will go to sleep, and in about two hours will wake up as if nothing were the matter." Further, chloral modifies the action of a fatal dose of Calabar bean, and sometimes saves life when endangered by it. As to morphia and Calabar bean, results are negative.

Between morphia and atropin a general antagonism is demonstrated, and a special one as regards cerebral functions. The opposite conclusions of Dr. John Harley are ignored by the author,—we believe justly. Considering theine and caffeine *versus* morphia, a distinct antagonism is found "within certain limits".

The poisonous effects of picrotoxine can be controlled by chloral; but, as with some other drugs, the converse action is not so clear (Crichton Browne). Digitalis, given some hours before aconitine, exercises a distinct protective influence; but when it is given at a less interval, the poisonous action is intensified (author). A similar curious result has been noted with other medicines, and thus the subject is made still more complex. Atropia given within sixteen minutes of a lethal dose of aconitine led to recovery. That the results are within marvellously exact laws as to dosage and time was already evident from Frazer's observations, but their exactness is difficult to tabulate, and the Vivisection Act has made progress difficult. Strychnia also antagonises aconitine, and Dr. Fothergill's conclusion is that the latter kills by paralysing the respiration, and that strychnia and atropia prevent this paralysis. Allowance has to be made for circulatory effects.

Belladonna controls some effects of jaborandi (Ringer), and nicotin of strychnia (Haynes). The latter fact is not put clearly, nor does Dr. Fothergill give any detailed references. Another edition would be improved by these, and by a bibliography; and we would commend to notice the researches of Kohler on saponin *versus* digitalin, and of Harnack on atropin and physostigma (*Archiv für Experimentelle Pathologie*, Leipzig, Vol. i and ii.)

The second chapter deals with a Practical Inquiry into the Action of the same drugs; and this plan involves a good deal of repetition and leaves a confused impression, which would have been avoided had all the observations referring to each drug been

grouped together; this is equivalent to saying that the plan of the work might have been better in our opinion. As it is, most readers will end its perusal with a mixed-up impression, and a sense of many details, impossible to remember and difficult to apply.

In this second chapter, then, we learn that Crichton Browne noted the depressant action of Calabar bean on special motor centres, and applied the knowledge with advantage in outbreaks of excitement in general paralysis, but chloral is still more suitable. Both remedies are unsuited for cases when the respiration is "involved" (meaning where it is *depressed*); but, in other conditions, when "there is vascular excitement and corresponding respiratory activity, the persistent use of these depressant remedies is admissible, and may be often resorted to with advantage". Chloral acts on the respiratory centre as well as on the hemispheres; the latter action is less powerful in idiots than in the intellectual. Chloral poisoning (six drachms) has been successfully treated by strychnia.

As to morphia, Wood is quoted: "That it mostly causes death by failure of respiration by direct action upon the centre in medulla." Hence an explanation of the opposite effect of belladonna. Morphia kills by paralysing the respiratory muscles, and for this and other reasons is unsuited for bronchitis.

Theine and caffeine tend, like strychnine, to induce spasm of the same muscles, and hence antagonise morphia on that point. Perhaps the most important practical point regards the combination of morphia and atropia; for, if they be antagonistic to each other, how do we explain the giving them together?

"As regards toxic effects on the cerebral organs, the two agents are mutually antidotal; but this antagonism does not prevail throughout the whole range of their influence, so that in some respects they do not counteract one another, whilst, as regards one organ, the bladder, both seem to affect it in a similar manner" (Mitchell and others); also, "Atropia stimulates the respiratory centre, but at the same time it lessens the irritability of the sensory nerves of the lung, and will thus, while increasing respiratory efforts, diminish the sensibility of the lung to irritation" (Brunton). Hence the addition of belladonna to morphia, say in cases of phthisical cough, aids the sedative effect whilst it stimulates respiration and controls the secretion of the skin. The author recommends a pill containing atropin  $\frac{3}{10}$  gr., morphia  $\frac{1}{2}$  gr.

Under the heading of belladonna, the experiments of Fraser and Bennett come under notice once more. It is credited with preventing cardiac as well as respiratory paralysis, with raising the blood-pressure, and with being the best "direct diuretic". Its good effects in asthma and whooping-cough are well connected with its action on the respiratory centre. It is good in melancholia, and the general impression given is of belladonna as a stimulant only; and yet there is a clinical fact which we have never been able quite to reconcile with physiological results, viz., that in some persons—generally the highly nervous—the drug has caused depression bordering on syncope. Dr. Fothergill does not seem to have met with it; it is, perhaps, "idiosyncrasy".

Under strychnia—we need scarcely have been told that "it is a therapeutic agent which has a very powerful action on the organism", any more than we need read that "the action of aconite on the heart is a very powerful and very decided one"—there is some room for judicious pruning here and elsewhere.

Experiments already noted again fill a page; but the practical point is, that "strychnia added to potash and expectorants is very useful in the treatment of chronic bronchitis with emphysema and dilated right heart"—it is presumed to act as a stimulant to the respiratory muscles immediately, *i.e.*, through the nervous centres.

Chapter iii deals with the Rhythmically Discharging Centres, after Hermann and Wundt, and describes the cardiac ganglia controlled by the vagi nerves. Digitalis then presents itself for consideration, and with it the author proves himself quite at home; he reproduces the views of his earlier special essay upon it, and refers again to his observations on its antagonism to aconite.

The respiratory centre in the medulla (the "nœud vital" of Flourens) is described; and the blood passing through this "excites the discharge which causes the respiratory movements. The more venous the blood, the greater the activity of this centre. The absence of oxygen rather than the presence of carbonic acid is the exciting cause of this." It is all well summarised after Dr. Michael Foster and the most modern work.

The medicines already mentioned are then reconsidered from the side of respiration. Calabar bean and aconite act chiefly on the centres just described; opium and chloral act also on the nervous system generally. All these tend to paralyse, whilst strychnia and atropia stimulate the respiratory centre. No mention of the sympathetic nerve is made all through the work, an omission, we think, of importance; for a decidedly paralysing influence upon it is part of the action of aconite, not to mention the others.

There follow some practical rules for the choice of the above medicines in pulmonary disorders. "There seems every reason to believe, the writer dare not yet make a more positive statement on a limited experience, that by a careful attention to the rapidity of respiration, its depth, its character, whether spasmodic, gaping, laboured, the agent may be selected which will, with fair certainty, relieve the case in point" (pertussis).

The final chapter collects some cases, most of them already published several times, of the Treatment of Poisoning by Antidotal Drugs; but we are surprised to see no allusion whatever to the numerous cases of opium-poisoning treated by belladonna, as recorded by Dr. Johnson (*Shanghai Hospital Report*, March 1872, and *Med. Times*). A point that has often occurred to us in connection with the subject of this essay, and which is suggested especially by Fraser's experiments, is this: If lethal doses of anything can be so distinctly controlled by other substances, is it too much to hope that otherwise lethal doses of *fever-poison* can be controlled, say by antizymotics or disinfectants? and that the theory long dominant, that fevers *cannot* be controlled by any medicine, but *must* from the very early stages and in the nature of things be only borne, and guided, and treated, if at all, by symptoms—is it possible that this theory may pale at last before a fuller light?

In conclusion, even if we differ from Dr. Fothergill in the method of his work, we must not fail to recognise his own copious knowledge of its subject, his facile pen, and the deeply interesting nature of the research he contributes to enlighten. Certainly his essay amply merited the honourable recognition it received from the Medical Society of London.

*Transactions of the American Gynecological Society.*  
Vol. ii, for the year 1877. Boston: Houghton, Osgood, and Co. London: Trübner and Co.

This volume of transactions may fairly lay claim to represent the progress of obstetric medicine in America. It contains the following papers: Annual Address on Medical Gynecology, by the President, Fordyce Barker, M.D.; The Functions of the Anal Sphincters, so called, with two Heliotypes, by James R. Chadwick, M.D.; Amputation and Excision of the Cervix Uteri, their indications and methods, with one woodcut, by John Byrne, M.D.; Report on the Corpus Luteum, with twelve chromo-lithographic plates, by John C. Dalton, M.D.; The Pathology and Treatment of Puerperal Eclampsia, by Professor Otto Spiegelberg; Dilatation of the Cervix Uteri for the arrest of Uterine Hæmorrhage, by George H. Lyman, M.D.; The Principles of Gynecological Surgery applied in Obstetric Operations, by A. J. C. Skene, M.D.; Researches on the Mucous Membrane of the Uterus, Preliminary Report, by George F. Engelmann, M.D.; On the necessity of caution in the employment of Chloroform during Labour, by William T. Lusk, M.D.; The present status of the Intra-Uterine Stem in the Treatment of Flexions of the Uterus, by Ely Van de Warker, M.D.; a Case of Vaginal Ovariectomy, by William Goodell, M.D.; Is there a proper field for Battey's Operation? by Robert Battey, M.D.; Subsulphate of Iron as an Antiseptic in the Surgery of the Pelvis, by H. P. C. Wilson, M.D.; a Case of Ovariectomy, followed by Fatal Tetanus, by Theophilus Parvin, M.D.; Sarcoma of the Ovaries, by Washington L. Atlee, M.D.; The value of Electrolysis in the Treatment of Ovarian Tumours, by Paul F. Mundé, M.D.; Congenital Absence and Accidental Atresia of the Vagina, mode of operating to establish the canal and evacuate retained menstrual blood, with three woodcuts, by Thomas Addis Emmet, M.D.; Case of Sarcoma of the Kidney in a Negro Child, with Heliotype, by W. H. Geddings, M.D.; Supplement to the Report of a Case of Xenomenia made at the first annual meeting in 1876, with two Heliotypes, by Theophilus Parvin, M.D.; The Hystero-neuroses, by George F. Engelmann, M.D.; *In Memoriam*, Charles E. Buckingham, with a Heliotype portrait, by George H. Lyman, M.D.; Cases illustrating important points connected with Ovariectomy, by Gilman Kimball, M.D.; The Radical Treatment of Dysmenorrhœa and Sterility by rapid Dilatation of the Canal of the Neck of the Uterus, with one woodcut, by Ellwood Wilson, M.D.; Dr. Uvedale West's views of Rotation as illustrated by the contrast between the mechanism of simple occipito-posterior positions and those of the bregmato-cotyloid variety, by John P. Reynolds, M.D.; Vascular Tumours of the Female Urethra, with the description of a speculum devised to facilitate their removal, by A. Reeves Jackson, M.D.; The simpler varieties of Perineal Laceration, their prevalence, consequences, and the importance of radical treatment, by Thaddeus A. Reamy, M.D.; Lying-in Institutions, especially those in New York, by Henry F. Garrigues, M.D.; the Menstrual Cycle, by John Goodman, M.D.

The volume also contains the discussions at the annual meeting in May 1877. A new feature in the volume for 1877 is an index of obstetric and gynecological literature of all countries from July 1, 1876, to January 1, 1877. During the last year, the names of Professors Pajot and Depaul have been added to the list of honorary members.



In his paper on Lying-in Hospitals, Dr. Garri- gues deals exhaustively with the question of their mortality as compared with that of out-door mater- nities. He fully demonstrates the fallacy of Le Fort's and Kennedy's statistics on the supposed excessive mortality in lying-in hospitals, and cor- roborates the statements made by Dr. McClintock at the meeting of the British Medical Association this year, to the effect that the real mortality of patients confined at their own homes is at least 1 in 125.

The introductory address of Dr. Fordyce Barker is devoted chiefly to a discussion on the relative merits of "Medical Gynæcology", which seems to consist almost entirely in constitutional treatment; and the "Mechanical System of Uterine Pathology", which is said to devote itself wholly to the mecha- nics of the uterus and to ignore the remaining parts of the human organisation altogether. Dr. Barker says that, "in studying this subject he finds that, since 1845, one hundred and two men have sought immortality by devising new forms of pessaries". We cannot, however, see that the study and perfec- tion of pessaries in any way shuts us off from the study of the various pathological conditions arising in the uterus and its appendages. Both are equally important in the successful treatment of uterine dis- ease.

FANCOURT BARNES, M.D.

*Diseases of Women.* By LAWSON TAIT, F.R.C.S.  
London: Williams and Norgate. 1878.

This is a book of 304 pages without illustrations. The chief object of the author has been to offer the results of his own experience in as condensed a form as possible. He has, therefore, he says, avoided as far as he could, long quotations, needless references, and detailed accounts of cases. Of its 304 pages, 7 pages are devoted to diseases of the mons Veneris; 47 pages set forth the diseases of the vulva; and 21 pages are taken up with the diseases of the vagina. This leaves 229 pages for the discussion of the dis- eases of the bladder, uterus, ovaries, and pelvic bones. With regard to the question of uterine dis- placements, Mr. Tait, speaking of Sir James Simp- son's views on the subject says: "I cannot find that any more complete and satisfactory account of them has been given since the appearance of his clinical lectures." So Mr. Tait disposes of uterine displace- ments in 12 pages. The pathology of dysmenorrhœa membranacea does not appear to have made progress of late in Mr. Tait's opinion, for he still clings to the old idea that these membranes are associated in some occult way with pregnancy. The chapters on ovarian disease testify to considerable personal experience. We certainly agree with Mr. Tait when he says that he is absolutely certain that no microscopical ele- ment is of any value for differential diagnosis. We saw not long ago an abdomen opened, only to find it full of ascitic fluid, on the strength of a microscop- ist's assertion that the fluid he had examined was undoubtedly ovarian.

Mr. Tait is not an advocate of the antiseptic treat- ment in ovariectomy. He says: "If the germ-theory be true, then the marvel is that any of us are alive, still more that any operation succeeds." Again, "If the stories about the much vaunted antiseptic treat- ment which we hear, *but which are not published*, be true, abdominal section under the carbolic spray is by no means either a simple or safe proceeding; and when its advocates can perform fifty ovariectomies

aided by its hindrances, and have only six deaths, then will be the time to listen to them."

The author rightly insists upon the purely mecha- nical nature of the dysmenorrhœa resulting from stric- ture of the external os. His treatment is bilateral incision of the os down to the vaginal insertion, and the introduction of a cleft stem pessary to prevent re-union of the surfaces. We have always secured the same result by a pledget of carbolised lint, which is not so likely to set up endo-cervicitis, or metritis. The book concludes with a chapter on diseases of the pelvic bones.

*On Tubercle of the Human Lung.* By D. J. HAMIL- TON, F.R.C.S.ED., Demonstrator of Pathology, University of Edinburgh. (Read before the Me- dico-Chirurgical Society of Edinburgh, June 6, 1877.)

It is the object of this paper of Mr. Hamilton's to show that true tubercle presents "a structure so well marked that, after one has had a little experience, it can be at once recognised." Mr. Hamilton intro- duces his subject by referring to two specimens of so-called miliary tubercle of the lung, in one of which the minute nodules are real tubercles, in the other due to catarrhal pneumonia. In the pathological theatre both these specimens would have been re- garded as "miliary tubercle" of the lungs, and the term would have implied that the seat of the tubercle was in the interstitial fibrous tissue. In fact, how- ever, Mr. Hamilton proceeds to observe, in neither case is the morbid product so situated, it being in both instances intra-alveolar. In what, then, do these two products differ? To the naked eye true tubercle of the lung, whether primary or secondary, forms a nodule of the size of a pin's head elevated above the surface of the lung-tissue, extremely sharply isolated from it, and invariably of a rounded shape. The nodules do not tend to run together, and in their distribution they follow no definite course. They are pretty evenly dispersed through the lung, and seldom if ever present any caseation, the reason of this being that they are supplied with blood-ves- sels. On their section each nodule is found to pre- sent a compound structure made up of two, three, or more "giant-cell systems". The giant-cells, of which every "system" contains one or more, consist of enor- mous masses of extremely granular protoplasm, gene- rally of a rounded or oval shape, and they each fre- quently contain from ten to one hundred nuclei and several vacuoles. From their outer border comes off a fringe of delicate processes which, running out- wards, branch, anastomose, and produce a network or reticulum in whose meshes lie cells of different kinds, epithelioid, leucocytes, or small giant-cells, one in each space. The walls of the network consist of the branching processes of the giant, and have invariably the same granular appearance as the pro- toplasm of the cell itself. The protoplasmic reti- culum is limited externally by a delicate band of fibrous tissue and spindle-cells, while outside of this again is a dense mass of leucocytes, in all pro- bability of inflammatory origin. Each nodule or tubercle is made up of several of these giant-cell systems. In the well-marked miliary tubercle of children, the nodules are very constantly developed in the proximity of a branch of the pulmonary artery, and not unfrequently an offshoot from this can be traced into the nodule itself. Hence casea- tion is rare in pulmonary tubercle, and is always suggestive of catarrhal pneumonia. In other organs,

however, caseation is frequent when the nodules reach any considerable size, the reason being that tubercle in these organs arises in connection with the small arterial twigs, which, becoming blocked up by proliferating cells, are rendered impervious to the blood-current.\*

In regard to the lung-tubercle, it is either a primary formation, as in miliary tubercle in children, or it is secondary to a chronic catarrhal pneumonia, when caseous material is present. All instances of so-called miliary tubercle are not, however, really tubercular. Many of them are, as already pointed out, merely disseminated nodules of catarrhal pneumonia in an early stage, but both in aspect and distribution appear identical with those of true tubercle; and Mr. Hamilton would therefore restrict the name "miliary tubercle" to the naked eye appearance, without reference to the actual structure of these nodules of both classes. Secondary tubercle—true tubercle complicating chronic catarrhal pneumonia—is most commonly found when there is much interstitial thickening. Tubercle may complicate ordinary phthisis, occurring in the neighbourhood of cavities, but the greater number of cases of ordinary consumption show no tubercle at all. Tubercle is frequently abundant, however, in the fibroid forms. In the fibrous bands spreading from the thickened pleura between the lobules, in the neighbourhood of dilated bronchi, or pseudo-phthisical cavities, tubercle is produced, its seat being probably determined by the situation of the peribronchial lymphatics. Tubercle often complicates ordinary phthisis, occurring in the neighbourhood of cavities. Mr. Hamilton considers that true tubercle very closely resembles catarrhal pneumonia in originating in a proliferation of the alveolar epithelium, so as to form an accumulation of cells, larger than those of pneumonia, within the alveolus. Instead of, as in pneumonia, directly becoming cheesy, the infiltration, which is destined to form a tubercle, becomes more highly organised, either by the enlargement of one of the cells or the coalescence of several to form a giant-cell, which generates or absorbs numerous nuclei, and gives out processes by which it is attached to the alveolar wall. Similar giant-cell systems formed in neighbouring alveoli are united by leucocytes and blood-vessels to form a single tubercle. Mr. Hamilton thus holds, contrary to the teaching of Virchow, that tubercle is essentially an intra-alveolar, not an interstitial, new formation.

Mr. Hamilton endeavours to reconcile the above account of the origin of tubercle with his previous remark that secondary tubercle most usually appears in newly produced interstitial tissue, by saying that the real seat of the tubercle thus arising is in the epithelioid lining of the lymphatic vessels, ramifying in the alveolar and bronchial walls. He regards the alveolar epithelium as a lymphatic epithelioid tissue. The intrusion of lymphatic cell-processes between the alveolar epithelium, described by Klein, would seem to indicate, however, that the alveoli are no more lymphatic spaces than the small bronchi, and that, although tubercle may in the course of its development intrude into the alveoli, it is not generated there. Otherwise, the products of alveolar catarrh and tubercle are histologically identical, yet each pursues a definite course to ultimate destruction.

R. DOUGLAS POWELL, M.D.

\* Mr. Hamilton leads us to infer that in his experience the pulmonary vessels do not become thus occluded.

## NEW INVENTIONS.

### VALENTINE'S MEAT-JUICE.

This preparation has held for some time a very high place in the estimation of American practitioners. It is not a cooked and coagulated "extract", with coagulated meat-juices, but an expressed juice of meat, containing nutritive albumen and hæmoglobin, as well as, the stimulating meat-salts. It often occurs in the report of American cases, as in one now before us in the *Virginia Medical Monthly* for August 1878, we read: "The patient was nourished by Valentine's Meat-Juice, the stomach rejecting almost everything else." It has before been observed that the tendency to reject food, which is the irritable characteristic of the digestive apparatus in cases of extreme exhaustion and debility, is overcome by sapid, uncooked meat-juices. Valentine's extract is palatable and stimulating, either mixed with water or taken as a liquor, or dealt with as other meat juices to make warm concentrated soups. The agents are Corbyn, Stacey and Co., Holborn.

### FOX BROTHERS AND CO'S "D. W. D." WHISKEY.

Messrs. Fox and Co. have introduced a whiskey branded "D. W. D.", the manufacture of the "Dublin Whiskey Distillery Company", Jones' Road, Dublin. Several samples of it have been obtained for use by us at different times during the last four months; and in each case the samples, which have been purchased without their knowledge, have proved to be very good sound whiskey, having a satisfactory amount of age, mellow flavour, and corresponding in quality to those medical indications which old whiskey is intended to fulfil.

### BAILDON'S APERIENT LOZENGES.

Messrs. Baidon and Sons, of Princes Street, Edinburgh, have brought under our notice some Aperient Fruit Lozenges, prepared from the bark of the *Rhamnus Frangula*, a sample of which they have also sent. These are now extensively prescribed by several of the leading medical men in London and other cities; and they certainly supply, in a most agreeable form, a valuable aperient medicine (not a purgative). These lozenges are not to be considered a patent or quack medicine in any respect.

## MISCELLANY.

THE annual meeting of the Association of German Naturalists and Physicians has lately been held in Cassel. Baden Baden has been chosen as the place of meeting in 1879.

THE Guinard prize of 10,000 francs has been awarded to Professor Melsens, of Brussels, for his researches on the use of potassium iodide in removing the poisonous effects of lead and mercury upon the human system.

FREE TRADE AND PROTECTION.—The *Chemiker Zeitung* reports that the American display of chemicals in the Paris Exhibition is utterly unimportant, and thus by no means realises the results prophesied by those ardent supporters of the heavy protective duties by which it was proposed that the chemical industry of America should be assisted to become a serious competitor of European industries.



**WOMEN DOCTORS.**—The first diploma of doctor of medicine granted to women in this century is stated to have been given in Boston in 1848. The University of Zürich accepted its first lady doctor in 1864. Russia admitted women to the School of Medicine of St. Petersburg in 1872. In Germany the first woman received as a Doctor of Medicine was Mademoiselle von Siebold. Since 1874 Leipzig has given diplomas to three lady doctors. In France, the first female Bachelor of Arts and Sciences was received in 1861, and the first Doctor in Medicine was Miss Garrett. The same lady had previously received also the first diploma of medicine granted to a woman in England, the license of the Apothecaries' Society of London. Since then the King and Queen's College of Physicians in Ireland has examined and conferred its diploma and license on eight lady doctors, 1877-78; and during the present year the University of London has opened all its diplomas in medicine, arts, sciences, and law to women.

**SKULLS OF WOMEN.**—M. Lebon, in one of the most interesting communications made to the Congrès d'Anthropologie in Paris, pointed out that, while the relative volume of the skull compared with the rest of the skeleton has increased with the progress of civilisation, the difference in size between the skulls of men and women is also much less in the savage than among the civilised races. This difference was admitted by the ethnologists present, and was explained by the President, M. Broca, on the ground that among the primitive races women led much the same lives as men, and took an equal part in the struggle for existence. According to these anthropological data the "protection" of women and their exclusion from professional struggles has ended in lessening the cranial capacity, therefore presumably the brain-power. Perhaps it is not too late to repair the mischief.

**PRIZES.**—The following prizes are offered by the Royal Lombardian Institute of Science and Literature in Milan. *Cagnola Prizes* (ordinary).—For 1879: The Nosological Geography of Italy; the diseases which prevail in Italy in general, and those which occur specially in the various districts, their causes, and mode of production. For 1880: A critical history of the telephone. Value of each prize, 1,500 lire (£60), and a gold medal of the value of 500 lire. *Cagnola Prizes* (extraordinary).—For 1879: 1. The nature of miasmata and contagia; 2. The direction of balloons. The prize for each of these subjects is of the same value as above. For 1882: Demonstration by experiment whether the generative material of hydrophobia is a virulent principle or an organised germ. Value of prize, 6,000 lire (£240). *Fossati Prizes.*—For 1879: The history of the progress of the anatomy and physiology of the brain in the present century, with special reference to the doctrine of Gall; prize, 3,000 lire (£120). For 1880: Illustration of some fact in the anatomy and histology of the human encephalon; prize, 2,000 lire (£80). For 1881: The motor centres of the cortex cerebri; prize, 2,000 lire.

**THE MICROPHONE IN DIAGNOSIS.**—Dr. J. W. Holland, Professor of Materia Medica and Medical Chemistry in the University of Louisville, has recently been experimenting with the microphone, and comes to the following conclusions (*Louisville Medical News*, July 28, 1878). 1. A noisy hospital ward is a bad site for the test. 2. Success is dependent largely upon the amount of flesh that covers the ribs of the subject. The sound-waves are never transmitted with clearness unless the person be lean. 3. The modifications produced by disease are not reported with a distinctness surpassing, if equal, to that attained by the unaided ear. 4. The rhythmic sounds of the heart mask all others produced in the chest, so as to make the instrument of no value in pulmonary diagnosis. 5. A medley of sounds, like rubbing and thumping, probably due to the movements of the foetus, utterly annihilate sounds of the foetal heart, such as are plainly audible to the trained ear unassisted. 6. The prospect of a successful employment of the microphone in physical diagnosis is, from present appearances, not very encouraging.

**MOVABLE EARS.**—The Darwinian significance of the power which in some few individuals still survives, of

voluntarily pointing, elevating, or depressing the auricles, is well known. Man possesses three wasted muscles, called auricular, which in the mammalia are capable of producing more or less extensive voluntary movements; but these muscles in him are very rudimentary, they do not obey the will, and, while preserving their insertions and their connections, they have ceased to perform their function. In alluding to this fact in one of his lectures upon anatomical anthropology, M. Broca adds that some individuals can succeed in contracting their auricular muscles, and cites the example of a professor of anatomy who possessed this power. At the close of the lecture, one of the audience, M. X., aged 60, came to him in his laboratory and said his father could move his ears at will, and that he himself could move his left ear, and immediately gave a demonstration of his power. He contracted two at least of the muscles of his left ear, the superior and posterior. He could thus elevate the auricle about five millimètres, followed by a retractive movement of about six or seven millimètres; after which the auricle, by its own elasticity, assumed its normal position. The movement of elevation was accompanied by a slight degree of inclination forwards, which led to the supposition that the anterior muscle contracted at the same time; but this movement could be accounted for by the action of the superior (attollens) of itself, since its fibres, as is known, are inserted obliquely downwards and backwards.

**TYPICAL OR COMPOSITE PORTRAITS.**—Those interested in the study of "physiognomy" will find highly suggestive matter in a notice of Mr. Galton's process to determine the existence of facial types, which appears in the *Medical Times and Gazette*. Mr. Galton shows that, from a number of portraits that have a general resemblance, though they differ in details, it is comparatively easy to construct a face which will be a typical representation of the portraits employed. To accomplish this, a number, say eight photographs, similar, though not necessarily exact in size and attitude, are selected. They are disposed in front of each other, so that a horizontal line passes through both the pupils in each photograph, while another line passes vertically half way between the pupils and down the middle line of the face. If now the photographs be of such a kind as to require an exposure of eighty seconds to take an accurate copy of any one of them, the most superficial is exposed for ten seconds. The cap of the camera is then readjusted, the first portrait removed, and the second similarly exposed, and so on to the eighth, the result being a "generalised picture", or, as Mr. Galton terms it, a composite of eight component portraits. Those of its outlines are sharpest and darkest that are common to the largest number of the components; the purely individual peculiarities leave little or no visible trace. The latter being necessarily disposed equally on both sides of the average, the outline of the composite is the average of all the components. Most of Mr. Galton's experiments have been made on the criminal class, and the typical face he gives in *Nature* of May 23 is very true to the general conception of the criminal type. Many useful purposes may be forwarded by his new process. For example, a type of any race of men may be formed from a large number of individuals of the race, taken at random. A typical life-like photograph may be composed from a collection of likenesses of any historical personage. A composite of all the brothers and sisters in a large family would be an approximation to what the average of the produce would probably be if the family were indefinitely increased in number. As regards the parentage, it is by no means sufficient to take a composite of the two parents; the four grandparents, and the uncles and aunts on both sides should be included. The composites formed on this principle would be of great interest in forecasting the results of marriages between men and women. The vast field Mr. Galton's discovery opens to men like Dr. Laycock, who devoted much attention to the physiological characteristics of disease, is evident, and any that can aid Mr. Galton in further research by providing him with the requisite materials, will confer a boon alike upon that gentleman and upon the profession at large.

# The London Medical Record.

## ON METALLOSCOPY.

By Dr. C. WESTPHAL, Professor of Psychology in the University of Berlin.

[A VERY interesting paper was read in June last before the Medical Society of Berlin by Professor Westphal (*Berliner Klinische Wochenschrift*, July 29) in which he gave an account of the information he had obtained during a recent visit to Paris with regard to the observations of Burq, Charcot, etc., on the effect produced in cases of hysterical anæsthesia by the local application of metal. Having shown to the Society some patients affected in this way, and given a *resumé* of the report of the Paris commission on the subject, he proceeded to describe the observations which he had made on patients since his return to Berlin.]

Since my return from Paris, I have, with the co-operation of my clinical assistants, made a number of researches on female patients, partly in the department for nervous affections, partly in that for convulsive diseases. Allow me to give a short account of these researches.

The first case was that of a hysterical patient (Beyer) aged 26, suffering from left-sided anæsthesia of the skin and organs of sense (amblyopia, colour-blindness, difficulty of hearing, loss of smell and taste) and of muscular sense (she had no idea of the position in which her left arm was placed, etc.) On April 24th, two two-mark pieces\* were applied to the left forearm. At the end of an hour there was no result. Two-and-a-half hours after the application, there was a sensation of creeping and crawling in the skin above the left knee; the patient pricked her arm, and cried out that she could feel; she also tried whether she could distinguish the temperature of warm and cold water. On examination at the end of four-and-a-half hours, the whole left half of the body was found to be just as sensitive to touch and pricking as the right, and the nature of the materials (glass, wood, metal, etc.) which were put into her hand, was correctly stated, and she could distinguish between warm and cold. The muscular sense was restored, and the anæsthesia of the organs of sense on the left side had disappeared. The phenomenon of transference could not be determined at the time of the observation; perhaps it had been present, and had already disappeared.

After four days, the anæsthesia returned in this patient; and at six o'clock on April 29 the pieces of silver were again applied to the left forearm. At 6.25 the patient had a distinct feeling of crawling in the left hand; on examination, it was found that the whole left half of the body had regained sensation, while the (sound) right forearm and hand, as well as the right half of the face and head, had become anæsthetic. This anæsthesia was limited by an arc running behind the ear, below which the skin of the neck and of the right arm was hyperæsthetic. The muscular sense was lost in the right arm. In this experiment the phenomenon of transference was

observed. After five days, it was noticed that the anæsthesia of certain parts of the right side had again disappeared, while sensation remained on the left side, so that sensation appeared to be completely restored. She soon had a hysterical paroxysm, after which the old condition of anæsthesia of the left side returned.

In the case of a non-hysterical patient, aged 22, who attempted to commit suicide with an enormous dose of chloral-hydrate, anæsthesia of the right half of the body remained. When I saw the patient sensibility had returned; but in the region of the ulnar nerve there was insensibility to touch and to slight pricks with a needle, while deep pricks were perceived, although not so much as in the normal condition. At half-past ten, A.M. on May 18, silver pieces were bound on the ulnar border of the right hand. At a quarter before two, P.M., after the passing away of some indefinite sensation of twitching in the hand, there was found to be a return of sensibility to the slightest touch with the head of a pin. At 5.30 P.M. the whole hand was the seat of subjective sensations of "twitching, tingling, and burning". On removing the bandage and the coins, the little finger and the ulnar surface of the fourth finger were found to have become sensitive to slight touch with the head of a pin. The bandage and coins were reapplied; notwithstanding this, early on the next day the sensibility of the affected parts was found to be again impaired; and at 3 P.M. the little finger had again become insensible to touch with the head of a pin and to slight pricking; on the other hand, the contact of the head of a pin was perceived in the antithenar eminence, where also slight pricks were pretty quickly recognised as such. Subsequent experiments on this patient, performed in a similar way, always gave negative results.

In the case of a hysterical patient (Sparr) who had anæsthesia of the left side without implication of the nerves of special sense, and so-called ovarian hyperæsthesia on the right side, the application of gold (five twenty-mark pieces) to the left forearm was followed by return of sensibility in the whole of the left half of the body. The patient had previously perceived a sensation of crawling in the arm. The sensibility remained during three hours.

In a second experiment, the metal being allowed to remain, the return of sensibility continued till the morning of the second day. An experiment with iron made on the same patient gave a similar result, *i.e.*, after five hours' influence sensibility returned completely. On the morning of the second day it had again disappeared, except in the left thigh, where sensibility remained a day longer.

The observations on this patient showed that similar results might be produced by two different metals.

A hysterical person (Hinze) aged 26, in whom the symptoms of hysteria were first manifested after a confinement, suffered from anæsthesia of the whole left half of the body (except the organs of sense) and partial anæsthesia of the right half. There was ovarian hyperæsthesia on the right side. At half past five, P.M., on April 27, a small galvanic element, consisting of a small plate of zinc and of brass, separated by a moist strip of linen, was applied to the skin of the left forearm, the zinc being undermost. At five o'clock on the next morning, the patient felt an itching at the point where the application was made. At 9.15 a.m. there was a return of sensibility, limited to the part around the seat of the application. At 11 o'clock of the forenoon of

\* A silver coin, about as large as an English florin.



the following day, the part was sensitive only to deep pricking.

At 11.50 a.m. on June 3 a very powerful horseshoe magnet was applied to the left forearm of the same patient. While the arm, wrapped in a thin fold of linen, lay on the table, the poles of the magnet, also lying on the table, were brought into continuous contact with the arm, the south pole being towards the periphery of the limb. At twelve o'clock, the skin at the south pole was sensitive to the prick of a pin; twenty minutes later (numerous trials having been made in the interval) there was sensibility at the north pole. At half-past twelve there was sensation in the part between the poles; slight touches, however, were not yet perceived. In all other parts of the arm there was complete anæsthesia. At 1 p.m. the patient had a feeling of creeping and formication in the forearm, extending to the ends of the fingers. At five minutes past one even slight touches were felt in the neighbourhood of the poles, and in the interpolar portion. At four o'clock only the lower two-thirds of the interpolar tract were sensitive to pricking; at six, deep pricks were scarcely felt close to the lower end of the magnet (the south pole). At nine o'clock, according to the patient's account, all sensibility had again disappeared. The experiment was varied repeatedly by placing the south pole of the magnet sometimes above, sometimes below; but sensibility always seemed to return first and disappear last at the south pole.

In the afternoon of May 12, copper plates were applied to the arm of the patient Sparr, the metal having been covered with varnish on the side next the arm. In the evening there was no change. At eight o'clock the next morning, the plates having remained applied the whole time, there was return of sensibility over the whole left half of the body.

At 11.30 A.M. on May 31, to the same patient were applied copper plates, coated with sealing-wax. A gauze bandage was drawn very firmly over the metal, so that the hand swelled and became slightly cyanotic; in order that the patient might not move the pieces of metal, a stocking was drawn over the bandage and fastened with a seal. In the evening there was no return of sensibility. The next morning, there was much tenderness of the forearm, and the hand was very oedematous; the condition was said to have been present since 3 a.m. On examination, sensation was found to have returned in the whole left half of the body, with the exception of the upper arm from the point where the bandage ended, and the shoulder as far as the spine of the scapula. In the right (healthy) arm, pricking produced pain—according to the patient's account, more than usual. The bandages and pieces of metal were removed at 7 a.m.; at ten o'clock the face and head had already again lost sensibility, but the nasal mucous membrane was still sensitive. On the other hand, sensibility had extended in the arm as far as the shoulder; in the forearm, the indications were doubtful. There was anæsthesia in the right (healthy) arm at the parts corresponding to those where the plates had been applied to the left arm; the phenomena of transference also appeared at a later period.

At 10 a.m. on May 22, bone-markers were applied to the left (anæsthetic) arm of the same patient, and fastened firmly by a gauze bandage. At 2.30 in the afternoon, there was pain where the markers pressed. Examination revealed a return of sensation at the parts which had been covered by the markers and bandage; the other parts of the arm remained

anæsthetic. The bandages and markers were allowed to remain through the night. At forenoon of the next day, sensibility had extended over the whole forearm with the exception of the fingers, a part of the wrist, and the lower radial division of the forearm. The presence of sensibility appeared to be dependent on the degree of tightness of the bandage and of pressure. The hand was red and slightly swollen, and perspired much. In the afternoon, sensibility had extended over the left half of the body, except the head, where only the forehead, cheeks, and mucous membrane were sensitive.

During my absence in Paris, my assistant, Dr. Adamkiewicz, made experiments with the application of sinapisms to the anæsthetic parts.

In the case of the patient Hinze, who had complete anæsthesia of the whole left half of the body and of the right forearm and leg, a sinapism was applied to the anæsthetic portion of skin of the left forearm. When it had remained about two hours, the whole of the skin which had become reddened was completely sensible to pricking, touching, etc. The experiment was repeated many times, always with the same result, so that, in the whole anæsthetic region, a large number of isolated sensible portions were formed, of which the patient could accurately determine the locality with her eyes closed, while in the closely adjacent surrounding parts the strongest irritation was not perceived. The patient is still in the hospital, and the experiment can be repeated on her at any time with the same result. After the restoration of sensibility by the irritation of the sinapism, the redness continues; and the presence of sensation in the part can be proved long after the skin has again become pale. It generally continues to the sixth or seventh day.\*

The same experiment was made on a patient named Hess, aged 22, the subject of anæsthesia of the left side, affecting also the organs of special sense and the muscular sense, and of weakness of the left limbs. The patient so far presented a classical example of hysterical hemianæsthesia, that she had severe ovarian pain on pressure in the left iliac region: this was each time followed by a sensation like an aura proceeding to the neck, where it took the form of a feeling of constriction, and thence passed to the head, where it ended in a circumscribed very painful spot. A sinapism was applied to the left forearm; about two hours later there was complete return of sensibility in the part, to the great astonishment of the patient, who before this did not perceive the roughest irritation. A rapid examination of the forearm of the sound side showed that the region analogous to that which had become sensitive in the left arm, had become anæsthetic in the right arm. This transference of anæsthesia to the healthy side disappeared after about six hours, while the restored sensibility of the healthy side remained and extended gradually, so that three days after the use of the cataplasm the patient no longer presented the slightest disturbance of sensation.

In the first-named patient (Hinze) the experiment was subsequently made of simultaneously applying sinapisms to symmetrical portions of both the anæsthetic forearms, in order to see how the phenomenon of transference would behave in these circumstances. After the application of the two sinapisms, one forearm only (the right) became sensitive, while the other remained anæsthetic in spite of the

\* Dipping the anæsthetic hand in hot water until much redness and turgescence were produced was not followed by any return of sensibility.

sinapism. It must be inferred from this that the stimulating influence of the right sinapism predominated, and that consequently the transference from the right arm was stronger, and neutralised the sensation stimulating action of the sinapism applied to the left arm.

Finally, I have to remark that in all these patients irritation of the anæsthetic portions of the skin with the electric brush was without result.

Besides those above related, I have observed a large number of positive results. Other results have been negative, but I do not describe them here, as they do not afford ground for conclusions, and it is my present purpose to lay before you the positive influences of the experiments in question on the treatment of anæsthesia. I have not as yet accurately examined the alleged influence of the applications of metallic plates on the motor power of the extremities; even with the help of a dynamometer, it seems to me very difficult to arrive at an opinion beyond doubt as to the amount of force which can be exerted by a patient.

Having communicated the above facts, I will now add a few remarks.

In the first place, I must dissent from the opinion not unfrequently met with in medical circles, that in the phenomenon of unilateral anæsthesia in hysterical persons one has to deal with a delusion; that it is only a sham, arising from the known tendency of certain hysterical subjects to exaggeration and deceit; we have nothing to do with this in these cases. In evidence thereof I observe that at night, during deep sleep, a prick in the anæsthetic portions remains absolutely without reaction, while a prick in the sensitive parts of the skin at once awakens the patient. Further, a number of the patients did not know until an examination was made that they were anæsthetic—a remarkable circumstance which has been remarked by other observers; for instance, in the patient Hess, immediately after her admission into hospital, the hemianæsthesia was discovered rather to her own surprise. Finally, the occasionally very peculiar distribution of the anæsthesia in the hysterical patients does not speak in favour of simulation; even in cases of hemianæsthesia there are sometimes found small circumscribed sensitive islands (in two of my patients there was such a limited spot behind the ear). I have thought it necessary to call special attention to this point, since in Germany these cases of anæsthesia in hysterical patients appear to be less known to most of the professional public than in France, whence, indeed, their scientific investigation has essentially proceeded.

On the other hand, I will not conceal the fact that one circumstance might seem calculated to cause a suspicion of the credibility of my patients. All of them had at some time—though in a very unimportant manner, and sometimes very innocently—come into conflict with the penal law. Whether there is here an accidental coincidence, whether, perhaps, the disposition to commit slight transgression is to be sought in the hysteria itself, may remain undecided here; we are, however, not entitled to infer from this fact alone the incredibility of the patients in question, who, during their several months' stay in hospital never gave cause for a complaint of this kind, and in whom no attempt to deceive or to make themselves interesting was ever observed. I mention this point only for the purpose of expressing my conviction that it cannot come under consideration in the examination of these persons, who for the

most part certainly have not wit enough to conceive or carry out such a part as that of hemianæsthesia. This being allowed, there remains no sufficient ground for doubting the assertions regarding the restoration (and subsequent disappearance) of the cutaneous sensibility by the various procedures above described; in the first patients—later on it was no longer possible—special care was taken not to let them know why the metallic plates were applied to them.\*

With regard to the anæsthesia of the organs of sense, I must relate an observation, the results of which might lead one to think of simulation. My colleague, Dr. Schweigger, had the opportunity of examining the patient Hess, who (*inter alia*) was amblyopic and colour-blind in the left eye especially, not being able to distinguish green. The experiment was conducted in such a way that, when the patient looked through a stereoscope, that which she believed she saw with her left eye was in reality seen with the right, and *vice versa*. In this way it was found that she saw green with the left (colour-blind) eye, and that it had a good acuity of vision.† This experiment, however, no more proves simulation than that with the rotating disk formed of red and green divisions, if we assume that we have to deal with diseased processes going on at the centre, and acting on the region of perception.

We must then, although, perhaps, reluctantly, recognise the facts which have been observed in Paris and Berlin in almost identical manner in very different persons and under different circumstances. Whether similar observations have yet been made in England, is unknown to me; but I have reason to believe that in that country anæsthesia in any form is extremely rare in hysterical patients, since Dr. Althaus of London wrote to me a short time ago that in England these cases of unilateral anæsthesia were not seen. Perhaps the cases will become more frequent there, after attention has been specially fixed on them.

By our researches, the correctness of the facts observed in France has been on the whole confirmed. The time within which sensation returned after the application of the plates of metal was in some of our cases much more considerable than has been observed in Paris. If we could not always ascertain the phenomenon of transference, this was probably due to discontinuity in the observation; the phenomenon might have been present, and have again disappeared. Observation was much impeded by the length of time required for the return of sensibility; one could not indeed remain sitting by a patient for many hours in succession. It was, however, shown (contrary to Burq's opinion) that different metals may produce an effect in one and the same patient; that a similar influence may be produced by metallic plates covered with varnish and with sealing-wax, as well as by non-metallic substances (bone card-markers); that here, however, the result appears to follow more slowly, and that pressure seems to play a certain part; and that similar results—and with comparative rapidity—may be produced by the application of sinapisms to the anæsthetic portions of skin.

\* M. Charcot has observed permanent return of sensibility after the application of metallic plates in hemianæsthesia arising from organic disease of the brain. In M. Magnan's practice, I saw a similar case, in which there was a return (but transient) of sensation after the application of the plates.

† A quite analogous result was obtained in an examination, by Dr. Hirschberg, of two other hemianæsthetic hysterical patients with unilateral amblyopia and colour-blindness.



The theory based on Reynard's experiments, that the return of sensibility depends on galvanic currents set up by the application of the metals, is in some measure shaken by our observations; in any case, galvanic currents can scarcely be any more regarded as the only active factor, for it must be proved that in the described methods of performing the experiments currents of similar intensity were produced. Perhaps the different irritants which come under consideration here are not all, as is proved by the negative result of dipping the anæsthetic parts in hot water, and of applying the electric brush. But the manner in which these irritants act, whether directly on the terminations of sensory nerves, or by reflex action (on the vessels? by dilatation?), etc., may be the subject of the most various conjectures, which it would be superfluous to discuss here, as to none of them can be given a preference established on fact.

The extension of sensibility from the locally treated portions of skin over the whole body, and the phenomenon of transference, remain quite unintelligible. Numerous other researches are necessary before we can think of expressing any conjecture on this subject, not to mention the formation of a theory.

As regards the therapeutic value of metalloscopy, it follows from what has been already said, that in many cases the return of sensibility through the application of metallic plates is limited to the place of application, and is only temporary; in some cases, on the other hand, sensation was permanently restored in the whole anæsthetic half of the body by a single application, but a new hysterical attack generally brought back the anæsthesia. In the case of Hess, related above, sensation remained after a single application of a sinapism. I again saw this patient after some months, and ascertained the absence of any anæsthesia; at the same time, there was a very considerable improvement in all the other hysterical symptoms.

If the wonderful fact should be established—and some such observations made in the Salpêtrière have lately been published—that the internal administration of the metal which overcomes the anæsthesia has a curative influence on the general hysterical condition, metalloscopy may obtain that importance in therapeutics which its discoverer already attributes to it.

A. HENRY, M.D.

#### CHARCOT ON HYSTERICAL CONTRACTION OF THE LEFT WRIST, TREATED BY REPEATED ARTIFICIAL PRODUCTION OF CONTRACTION OF THE RIGHT WRIST.

By DR. ROMAIN VIGOUROUX.

(Concluded from page 417.)

WE will consider, without dwelling too long on the subject, the course and salient features of the disease. The hysterical diathesis in Pauline J., suddenly manifested itself without there having been any suspicion of its presence from her antecedents. In this respect, the case approaches those of local hysteria of traumatic origin, which M. Charcot has described (see p. 236). Once declared, the disease presented most of the characteristic symptoms; we say the most, for the major convulsive attacks have been always absent; but, before the appearance of

the contraction, the ovarian pain, the visceral disturbances, and the characteristic headache, constituted a group sufficiently significant even if cutaneous and sensory anæsthesia had not completed the picture. This last, indeed, did not appear under the form of regular hemianæsthesia which we are accustomed to see. The abolition or diminution of sensibility was seated almost exclusively on one side, the left, but it did not involve nearly the whole of it. This distribution of the anæsthesia, upon which M. Charcot long ago insisted in his lectures, is always interesting to notice as a possible source of embarrassment in diagnosis. M. Abadie has recently reported several cases borrowed from ophthalmic pathology which support these remarks. But, not to stop at the purely clinical side of the observation, that which strikes me most forcibly is the artificial production of contraction; this being obtained, it was natural to ask whether one could not utilise it to weaken and finally displace the primary affection, a view which appears to have been justified by the sequel. Doubtless, it would have been more precisely proved, had the treatment consisted exclusively of the artificial production of the contraction; but the futility of faradisation in similar cases is so well known, that we can scarcely attribute any share in the result to the very limited employment of that means.

Moreover, the production of contraction and the utilisation of this fact as a means of cure, lose their strangeness when we associate them with recently acquired notions upon certain hysterical phenomena. It is known that anæsthesia may be produced in hysterical subjects (by metallic applications, etc.) under two conditions: either in the absence of all actual alteration of sensibility, or on the contrary; and then the anæsthesia occupies parts of the body which seem to be quite unusual. This M. Charcot calls *metallic anæsthesia*. Artificial contraction is analogous. But it cannot be obtained in all hysterical cases indifferently; it requires, as M. Charcot has noticed, a special predisposition in the patient—that is to say, she must be, or have been recently, affected with contraction. In reality, out of a considerable number of metallic investigations, magnetic or electric, we only succeeded on two occasions (not counting the present) in provoking contraction, and these were in two patients who each presented a contraction of recent standing, and of in other respects transitory character. But this necessity for its pre-existence is also true of the anæsthesia. As to the possible influence of the induced affection upon the old one, this was clearly pointed out by that other recently studied phenomenon, *transference*. It was first seen in hysterical patients; it is a kind of physiological equilibrium of the two sides of the body, in virtue of which certain local phenomena of sensation, temperature, etc., are in general accompanied by a modification in the inverse direction of the symmetrical part of the opposite side of the body. It is doubtless to this kind of mechanism that we must attribute the influence exercised by the production of the new contraction over the disappearance of the old one. The progress of the observation itself supports this view; the morbid contraction yielded only gradually; as it gave way, the artificial contraction became more easily effected, and lasted longer each day, so much so that, if we had not taken care, increasingly needed, to make it disappear, we should have had a new contraction absolutely the same as the old one, replacing it permanently in the opposite limb.

These are the essential points in our observation ; but there remain a certain number of details which may be usefully pointed out.

1. The simple application of a magnet to the healthy side produced anæsthesia, contraction, etc. ; whilst the most varied means applied to the diseased side gave rise to no appreciable modification. This is an example of the general fact, which we have had occasion to verify so often ; for instance, suppose a *left* hemianæsthesia, in which the magnet is powerless to restore sensibility, while the same magnet applied to the *right* produces these anæsthesia, which, by *transference*, will be accompanied by the appearance of sensation in the *left* side. We should then have obtained by indirect action that which we had vainly sought from the same means applied directly. We shall draw from this the maxim to act always upon the least affected side, both in investigations and in treatment by the new methods. In our case, what would have been the result had we persisted in acting directly upon the contraction ?

2. In the progress of the case, the reader must have noted the singular course without relation to anatomical conditions and the return of sensibility in the affected limb ; and, finally, that movement reappeared successively in the different parts, following the same order. The sensibility possessed, moreover, an anomaly in its existence on the two sides of the body ; there was no transference of sensibility. In the first sittings, indeed, we saw absolute anæsthesia invade the right hand and forearm without modifying that existing on the left ; and later, when sensibility returned to the left hand it did not diminish on the right. Therefore, no transference of sensibility existed ; and we may remark on this, that it had been considered to be justly inferred from some facts that the phenomenon of transference was characteristic of hysterical hemianæsthesia, and was wanting in that of organic origin. This proposition cannot be entirely supported ; on the one hand, we have here a case of (incomplete) hysterical hemianæsthesia which does not show transference ; and, on the other, we have recently seen a case of hemianæsthesia (from a syphilitic cerebral lesion), in which the return of sensibility under the influence of the magnetised bar, was accompanied by the most evident transference. Moreover, contrary to that which has appeared constant in cases of this kind, the effect produced did not remain permanently in the first sittings, but became so only gradually, and as we may say, in proportion, there was at the same time a notable amelioration of the hemiplegia with athetosis. In the preceding instances we have taken care to say transference of sensibility, and not general transference. It is necessary to remember that the modifications produced by agents such as metals, magnets, etc., influence at the same time, but in a very unequal manner, according to the case, four principal elements : sensibility (general or special), muscular force, vascular tonus, and temperature, whence four very different species which may be produced independently of each other. Our observation affords an example of this distinction, as we shall see. In the first applications we observed at the same time analgesia, chilling, diminished tonus of the small vessels, abolition of muscular power, and finally contraction. In the following applications the analgesia showed itself more and more freely ; and, in the later ones, the contraction was obtained without accompanying diminution of sensibility. It was the same for the chilling which, before definitively ceasing to

show itself, was once or twice replaced by a notable elevation of temperature. The state of the cutaneous circulation was not observed exactly, except in the earlier experiments. There was then a diminution of the tonus of the small vessels rendered evident by the hyperæmia which followed the least irritation. Finally, with regard to the muscular power, paralysis and contraction have not ceased to show themselves ; they have been more and more rapid in their appearance, and more durable in proportion as they became diminished on the affected side ; there, without doubt, transference was effected.

3. It is important to remark upon the mode of production of the contraction ; whatever the part of the forearm to which the magnetic pile was applied, it only involved the flexors. When, for example, the magnet was placed upon the extensors, these preserved the suppleness in spite of the appearance of analgesia, and after twelve or fifteen minutes, when the analgesia had invaded the integument of the palmar surface, the flexors contracted. Where the application was made directly over the flexors, this occurred much more quickly. It is to be noted that the analgesia never extended higher than the fold of the arm—that is to say, about a centimètre above the upper pole of the magnet, although in every other respect the limb counterfeited faithfully the state of the affected side. We have never observed, on this occasion, the difference of action of the poles seen by other observers (D. Maragliano and G. Seppilli, *Rivista Sperim. di Freniatria*, 1878).

4. When the contraction had disappeared on the left, it became possible to recall it by the simple magnetic application. We saw, then, a simple reproduction of the former state.

5. It was not only in the forearm that we could act in this way. The magnet applied to the left leg gave rise to contraction ; in a first experiment, where the two poles of the magnet were placed on the fibula, the contraction began in the short peroneus—that is to say, in a non-flexor muscle, but which found itself closest to the bar. Another time, the magnet was placed on the posterior surface of the limb, and the flexors only were contracted. Opportunity has been wanting to observe whether contractions may be obtained in other parts of the body. Nevertheless, a feeble current (two elements) applied at two different times to the head did not produce any effect upon the muscles of that part. It is not necessary to believe, after what has preceded, that the magnet has, in this, or other cases, a specific property of producing contraction. Thus, in one patient, we have observed absolute identity of action in the magnet and the galvanic current.

*Experiment I.*—A descending current of thirty elements of Trouvé, the electrodes being upon the anterior surface of the right forearm, produced rapidly marked contraction with chilling of the hand.

*Experiment II.*—The same current upon the dorsal surface of the left forearm had no effect upon the extensors, but energetic contraction of the flexors ensued.

*Experiment III.*—An ascending current of two elements also produced contraction on the right.

It is astonishing to see currents so different in direction and intensity produce absolute equal results. The following experiments may explain this peculiarity.

*Experiments IV and V.*—Unipolar excitement, properly so called, was practised—that is to say, the forearm was touched by an electrode communicating



with the negative pole of a pile of eighty wet elements of Trouvé, the positive pole remaining insulated. The contraction supervened as before, and we observed the peculiarity, that it was accompanied by pronounced analgesia, although at this period of the treatment (July 24th) sensibility had for long ceased to be affected. We obtained the same result by using a dry pile of Zamboni, which we applied by its tin end (negative pole).

*Experiment VI.*—The patient was placed upon an insulated stool, and kept for twenty-five minutes in communication with the electrical machine. Nothing notable was produced. Afterwards, without making her change position, we directed the *electric blowing* (*souffle électrique*) upon the external part of the right forearm. Almost immediately contraction of the flexors commenced, and speedily attained its maximum. It yielded afterwards to sparks drawn from different parts of the limb.

*Experiment VII.*—In repeating this experiment on the following day, we commenced by directing upon the palmar surface sparks which caused jerks in the flexors, but not contraction; this appeared after the *blowing* was used. By this latter expression, "*blowing*," this is meant: the patient is placed upon the insulated stool and communication made with the conductor of the machine; a metallic point is brought near her, not near enough to cause sparks, but enough for the point to discharge its electricity. The movement of electrified air which results, produces in the patient the sensation of blowing. This mode of discharge differs from the spark in being slow, continuous, and nearly uniform. These experiments seem to us to explain all that is essential, either in the production of the contraction in the present case, or in metalloscopic phenomena generally; it is a local and lasting variation in the electric tension. The physiological action which this local action gives rise to, may extend itself more or less, but forms part of another order of facts. But if we can conceive in this manner the part played by electricity in this class of phenomena, we ought not to forget that they may be obtained by proceedings in which electricity does not intervene, at least directly. Thus, to keep to the present case, we have produced contraction in our patient by means of cold.

*Experiment VIII.*—A piece of ice was applied to the anterior surface of the right forearm. The skin reddened strongly, and contraction began at once.

*Experiment IX.*—The patient being subjected to *hypnotisation* at the moment when she was freed from the induced contraction, this was reproduced very strongly, and persisted after the cessation of sleep.

But there is another mode of excitation which is perhaps new, and, in any case, appears instructive. We assured ourselves that the contact of sonorous bodies, kept in vibration, produced upon hysterical patients and upon other sick persons exactly the same effects as metals, the magnet and electricity (the application may be local or general); we have, therefore, made the following experiments respecting contraction.

*Experiment X.*—The hand reposed by its palmar surface upon the wooden support of the tuning-fork of a chronograph, put in action by an electro-magnet and giving 100 double vibrations per second: contraction manifested itself after ten minutes; it was accompanied by numbness and analgesia.

For general application, we employed a gigantic tuning-fork, kindly placed at our disposition by the learned constructor of acoustic instruments, M.

König. The resonance-box of the instrument was about 1 mètre 20 centimètres (nearly 4 feet) wide, and 40 centimètres (16 inches) high. It possessed, besides, sufficient solidity for the patient to stand or sit upon it. The vibrating branches were set in motion by means of a violin-bow, and furnished 60 double vibrations per second. By this means we caused hemianæsthesia to disappear as easily as with the electric machine, but perhaps not quite so quickly. This is not the place to enter into the details of the other phenomena observed.

*Experiment XI.*—The patient sat on the box three-quarters of an hour, without anything noteworthy occurring. She was then placed on a chair near the box, and her right hand laid upon it. Contraction was produced in fifteen minutes.

We would remark upon the analogy which exists between this experiment and that mentioned above of the electric stool. In both we obtained nothing by *general* action, while the same action promptly gave the looked-for result when it was localised.

Seeing the number and diversity of the agents capable of producing metalloscopic phenomena generally, and specially contraction in the above case, we are tempted to ask whether there is not something arbitrary in the choice of these agents, and if after all any excitation may not replace all? The following facts are calculated to dissipate this doubt. We have tried in vain to produce contraction in our patient by presenting the negative pole of the magnetised bar, by imitating the electric blowing by prolonged insufflation with a spray-producer, by making metallic applications of iron, copper, tin, etc.

Whatever may be the opinion that is formed upon these theoretical points, the essential parts of the observation do not the less exist. We will summarise them thus: the possibility of producing for therapeutic purposes a contraction in hysterical patients already presenting this affection. This fact offers the greatest analogy to metallic anæsthesia, and makes us think that it is not isolated, and that it will be equally possible to reproduce the other local effects of hysteria. In the second place, the probability of the induced affection having a favourable effect upon the course of the disease. These two points, if supported by other observations, not the less constitute a new therapeutic means, the use of which, even if limited to hysterical contraction, is not destitute of importance. We know too well that the rational treatment of contraction is yet to be discovered, and that most frequently the practitioner has but the choice between indefinite expectancy and a surgical operation condemned by the greatest surgical authorities (Brodie, quoted already by M. Charcot).

As for the method; we will not stop to speak of the proceedings; nevertheless, we must refer to the part played by static electricity in this case. We knew already that it possessed the physiological properties of the metals, the magnet, and feeble currents, but with a superior degree of energy and certainty; some facts, already very numerous, permit us to affirm that, by its therapeutic powers, it is placed equally in the first rank. We shall probably have to return at some future time to the concluding history of our patient.

ROBERT SAUNDBY, M.D.

## HOFMANN ON CADAVERIC PHENOMENA.

PROFESSOR HOFMANN, of Vienna, has published an article on this subject in the *Vierteljahrsschrift für Gerichtl. Medicin*, vols. xxv and xxvi.

*Spermatozoa*.—The movements of the spermatozoa have been observed by Professor Hofmann for from eighty to one hundred hours after death.

*Spectral Examination of Blood: reducing action of the organic tissues upon that fluid*.—Professor Hofmann found that blood taken from a dead body, with the precaution of preventing any access of air, does not give in the spectrum the two absorption bands of oxyhæmoglobin, but only a single broad band corresponding to reduced hæmoglobin. Professor Gwosdew, of Moscow, first made this discovery in examining the blood of persons who had died by asphyxia, and he looked upon it as diagnostic of this mode of death. Koselanski, however, proved that the blood of every dead body presented the same spectral characters, provided it had not been exposed to air. It would appear, therefore, that the tissues of the body take the oxygen from blood in a few minutes after the lungs have ceased to convey air to that liquid. The venous blood, then, contains only the reduced hæmoglobin. Hoppe-Seyler and Hofmann have confirmed this observation, but Albert Schmidt has shown that there are exceptions to this condition in several kinds of death in warm-blooded animals. Thus, in death from breathing carbonic oxide, a gas which acts chemically on hæmoglobin; in death from starvation or cold, in which the reducing power of the tissues is diminished; or finally, in death from the entrance of air into the veins—the blood retains its oxidised characters; but whether they are retained for only a short time, or for an unlimited time, has not yet been distinctly demonstrated. The difference is probably only of a temporary nature, since, as Hofmann justly remarks, the blood has the power of consuming its own oxygen, in the absence of any contact with organic tissues. It is a well known fact that blood thus becomes spontaneously deoxidised especially under a warm temperature.

*Hypostatic Changes. Cadaveric Lividities*.—If, as a rule, an incision into the part allows a medical jurist to distinguish easily ecchymosis from cadaveric lividity, there are cases in which the diagnosis becomes difficult. Under putrefaction, the blood as it is liquefied is imbibed by the tissues of the skin, reddens them, and thus to a certain extent simulates an extravasation. In advanced putrefaction this simulation is greater, owing to the softened state of the tissues and the more ready absorption and diffusion of the liquefied blood. This is especially observed in parts that have been wounded. In putrefaction, the extravasated blood of ecchymosis is also liquefied and diffused. In this case, a distinction is scarcely possible.

In certain cases, simple hypostasis may lead to a rupture of vessels and extravasation of blood. If a dead body remain suspended for a long time after death, rounded petechial spots may appear on the lower half. These are of a reddish or reddish blue colour, varying from the size of a pin's head to that of a lentil, and they are caused by slight extravasations of fluid blood beneath the epidermis. If the head have fallen on one side, they may be met with on the face and under the conjunctivæ; their production in these parts before death is of considerable importance. The abundance and fluidity of the blood, as well as a degenerate state of the tissues,

are conditions favourable to the production of these spontaneous extravasations. They are met with under fatty degeneration of the tissues, septicæmia, chronic alcoholism, and poisoning by phosphorus. They are often produced during life, and those which occur after death can be recognised only by their situation in depending parts of the body. As to internal hypostases, M. Hofmann dwells on the necessity of not confounding them with pathological changes during life—an error often committed, but easily avoided.

*Cadaveric Rigidity*.—The question here propounded by M. Hofmann is whether, in this condition of the dead body, the muscles really undergo contraction or not. Experiments performed on muscles excised show that contraction does really take place. Is this also observed in dead animals in which there has been no interference with the bodies, and in which the antagonist muscles can contract equally? and may a change of position result from such muscular action?

M. Hofmann performed many experiments on different animals, such as rabbits, cats, and chickens, leaving some untouched after death, and dividing the tendons of the flexors and extensors of others. Locomotion of the limbs was frequently observed, but not in young animals or those which had died in an exhausted state.

In the dead human body there is one muscular movement which is well attested and frequently observed, namely, the spontaneous raising of the lower jaw. All other muscular movements, especially those of the limbs, are exceptional, and more or less open to doubt. At the same time, it would appear that in the upper limbs the flexors prevail over the extensors, while in the lower limbs the reverse is observed. Numerous observations show that no movements take place in the fingers; and what is important in a practical point of view, is the complete failure of all experiments to cause the hand of a recently dead body to grasp an object or to hold it firmly, as by a voluntary contraction of the muscles during life. Ligatures have been used in order to keep the fingers completely closed upon the object, but in spite of these mechanical contrivances the object has been simply held, not grasped, and it fell from the hand so soon as the artificial pressure was withdrawn. Hence the discovery of a weapon firmly grasped in the hand of a person found dead is still a fact of great importance in a medico-legal point of view.

Under this head are included observations on the extraordinary attitudes observed in those who were suddenly killed on the field of battle during the late wars, of which numerous authentic instances have been published. To the same class of phenomena belong the expression of the features in a dead body, corresponding to that which existed at the last moment of life—the persistence of the cutis anserina or contracted skin—the contraction of the penis and the scrotum, especially in the drowned, and other examples of a similar kind. This state of cadaveric rigidity is explained by Du Bois Reymond of Berlin, and by most authors, on the theory that it is the persistence after death of the muscular contraction exerted during life, until the access of rigidity, which sets in early in these cases; but nothing positive is known on this subject. M. Hofmann does not deny the existence of the extraordinary attitudes observed in the dead, but he thinks they are produced in a more simple manner. It must be remembered, he says, that at the moment of



death the muscles which are antagonistic to those which have been excited into a given position, are simultaneously struck with loss of power, hence they cannot act so as to change the position of a limb. In many cases gravity has no influence, as in the different positions of the fingers; in others its power is counteracted by some obstacle, and the position has been maintained until the access of rigidity. If the obstacle have been removed or has disappeared, or if the dead body have been moved from its position, the attitude in which it is found rigid may appear extraordinary or inexplicable on ordinary rules. M. Hofmann refers to a number of cases of this kind in bodies brought into the dissecting-room. It has been in these cases easy to discover the cause of the unusual attitude; and if such instances are not more commonly observed, it is because the dead bodies are arranged for the purposes of dissection. No fact of this kind is quoted in the reports, nevertheless the possibility of the occurrence cannot be denied. More observations are, therefore, required before we can positively determine whether those remarkable phenomena depend on the occurrence of sudden cadaveric rigidity at the moment of death, or on the conservation of muscular contractility up to the commencement of cadaveric rigidity.

M. Hofmann has given a table of the state of the muscles in 324 dead bodies as they have been received for the purpose of dissection, especially noting the time of commencement, the duration and mode of distribution of cadaveric rigidity; but the facts are at present too conflicting to allow any practical conclusions to be drawn from them.

#### *Gaseous Putrefaction; Identity of the Dead Body.*

—It is well known how the features of a body are deformed, as a result of the production of gases during putrefaction. It is often of importance to establish the identity of a dead body, but owing to this cause recognition is impossible, and mistakes are frequently made. This is especially observed in cases of death from drowning. M. Tourdes, of Nancy, has recommended a process for restoring the features to such a degree as to admit of identification. The bloated head is repeatedly immersed in alcohol containing alum and nitre. Dr. Richardson's process is more complex, and less favourable in the results. M. Hofmann has adopted with success the following method, which is based on the fact that the green colouring matter of putrefaction is soluble in water. The head is opened in the usual way, the brain removed, and some deep incisions are made into the parietal and occipital regions. It is then placed in cold running spring-water. In from twelve to twenty hours the green colour has almost, if not entirely, disappeared, and the emphysematous swelling is much reduced. The upper part of the cranium is replaced and fixed by the skin, which is drawn over it. The head is then plunged into a saturated solution of corrosive sublimate in alcohol, and by this any green colour or emphysema is effectually removed. The face re-assumes its natural form, the skin being of a greyish-white colour, an effect depending on the chemical action of the corrosive sublimate.

A microscopic examination of the different tissues shows that putrefaction begins in general by a chemical transformation of the albuminous compounds, similar to the granular and fatty degeneration observed in these structures during life. This should be remembered in drawing any inference from the degeneration of glandular organs, such as the liver and kidneys, as a result of supposed pathological changes. Putrefaction may give rise to analogous

appearances. Putrefaction in the liver soon leads to the production of leucine and tyrosine. In poisoning with phosphorus, these organic principles are not found; but the above fact shows that their presence in a putrified liver is not inconsistent with phosphorus poisoning.

Another fact is pointed out by M. Hofmann. Crystals of *hæmatoidin* are met with after a certain time in extravasations of blood. It had been supposed that the presence of these crystals was limited to those cases in which the blood had been extravasated during life; but this is an error, as they have been found by several observers in bodies in different states of putrefaction. M. Hofmann has established their existence in the blood of children whose bodies were putrefied at birth. They are found especially in those situations which are the seat of hypostatic imbibition.

In reference to putrefaction, M. Hofmann states that one of the most important elements favouring rapid putrefaction in the earth, is the permeability of the soil in which the body is buried to air. He gives the following table of the relative permeability of soils, from the researches of Fleck. Assuming that dry gravel exempt from clay has its permeability by air represented by 100, then that of dry gravel with clay would be 34.50; sand dried in air 27.47; argillaceous gravel saturated with moisture 18.13.

[The practical importance of the observations here made on the effects of putrefaction in destroying identity, has been lately verified on a large scale in the accident to the *Princess Alice* steamboat, by which nearly 700 persons were drowned in the Thames. Many bodies could not be identified at all; in others the identity was mistaken, and the bodies were buried under wrong names; in fact the identity was more frequently and correctly established by the clothing than by the features of the deceased persons. —*Rep.*]

A. S. TAYLOR, M.D.

#### BÖRNER ON HÆMOPHILIA OR THE HÆMORRHAGIC DIATHESIS IN RELATION TO GYNÆCOLOGY.

THE relation of hæmophilia, or the hæmorrhagic diathesis, to gynæcology, is the subject of an article by Dr. E. Börner, *docent* in the University of Gratz, published in the *Wiener Medicinische Wochenschrift* for August 17 and 31, September 7, 14, and 21. He refers also to an essay on the same subject, published by Kehrer in the *Archiv für Gynäkologie*, Band x.

After some preliminary remarks, Dr. Börner relates the case of a lady, Frau R., aged 52, who consulted him early last year on account of obstinate hæmorrhage from the genital organs, and general weakness. She said that she had frequently suffered from great losses of blood, especially during labour. The introduction of the speculum was always attended with more or less hæmorrhage. On making a very careful examination, Dr. Börner detected the blood oozing from the surface of the vaginal mucous membrane, as soon as the speculum came into contact with it; and on once slowly introducing an uterine sound, bleeding took place from the os uteri. Hæmorrhage was also induced by simply applying the finger to the vaginal mucous membrane, and moving it to and fro.

A complete family history extending back beyond her parents could not be obtained, as she had left her native place at an early age. Her maternal

grandmother and two of her mother's sisters died at an early age from some unknown cause. Frau R. had one brother and two sisters, one older and the other younger than herself. The brother had chest-disease, but was not a bleeder. The eldest sister was of healthy appearance when young, but after her marriage became pale, emaciated, and weak. Nothing special was known regarding her menses and confinements, but on one occasion she appears to have complained to Frau R. of having suffered from continuous and obstinate hæmorrhage from the genital organs. She died, apparently of phthisis, at the age of 51. Of her five children, two died young; of the remaining three, two (a son and daughter) were healthy, the third (a son) was always ailing from an affection of the lungs. The youngest of the three sisters was also at first apparently healthy, but, after an early marriage, also became emaciated and pale. Nothing is known regarding her menses, but labour was always attended with dangerous flooding. Her husband also once stated that she daily had small discharges of blood from the genital organs. She died at the age of 32, of hæmorrhage from the genitals, three months after an abortion which was accompanied by frightful bleeding. Her eight children—one male and seven females—are healthy.

Frau R., herself married at the age of 18, a month after the first appearance of the catamenia. She was weakly during childhood, but, after an attack of typhus at the age of 14, was in good health up to the time of her marriage. The act of coitus was from the first always attended with hæmorrhage, which continued, though slightly, about twelve hours. She had no hæmorrhage during any of her seven pregnancies, but the reverse was the case in her labours, regarding which the following account is given.—*First Labour.* After severe *post partum* hæmorrhage, accompanied with several attacks of syncope, a great discharge of blood continued up to the fourteenth day, and did not entirely cease until the end of the second week.—*Second Labour.* There was severe hæmorrhage for four weeks; and it ceased gradually at the end of the seventh week.—*Third Labour.* The patient was confined to bed for two months by continued loss of blood.—*Fourth labour.* On account of continuous hæmorrhage the christening of the child had to be put off for thirty weeks, and even then the mother could scarcely stand upright.—*Fifth labour.* The patient had obstinate cough, with expectoration. She lay in bed three months, and bled nearly the whole time.—*Sixth labour.* Rest in bed during two and a half months was necessary; the hæmorrhage lasted six weeks.—*Seventh labour.* The duration of the bleeding was six weeks. On each occasion remedies were tried, but apparently without effect. She suckled each of the first three children during twenty weeks. The application of the child to the breast was on each occasion followed by a discharge of blood from the genital organs, and the act of sucking was said to have also produced bleeding from the nipple. The menses reappeared generally in the fourth week after the cessation of the hæmorrhage; they lasted three or four days, and were not extraordinarily profuse. It was also ascertained that she had been several times the subject of severe mental trouble, and that on each occasion there had been severe hæmorrhage from the genital organs, which confined her to bed for some weeks.

The patient also presented other indications of the hæmorrhagic diathesis. Dentition was attended with hæmorrhage from the gums; so also was extraction of the teeth. For many years she had been

subject to diarrhœa, which for the last eleven years had been attended with hæmorrhage from the bowel. Pressure or a blow on the skin was always attended with ecchymosis. She had varices of both legs; and in rubbing one with her finger, in 1872, it burst, and gave rise to hæmorrhage, which confined her to bed for three months.

Dr. Börner treated the patient by the introduction of cotton-wool, moistened with liquor ferri perchloridi, into the uterus, and washing the vagina with a very dilute solution of the perchloride. He also prescribed daily cold sitz-baths, and cold ablutions of the genital organs; iron and ergot were given internally, and a cooling diet and rest were ordered.

Regarding the patient's seven children, the following particulars were obtained. The first, a son, had good health, but was subject to severe epistaxis whenever he drank beer, and had very frequently also hæmorrhage from the gums. The second, a son, suffered from rickets and hæmorrhage from the skin; he died at the age of 5, after having vomited blood for four or five days. The third, a son, who is married and lives at a distance, is healthy, so far as is known. No disposition to bleeding was noticed during his childhood. The fourth, a son, aged 24, living in Gratz, suffered up to his sixth year from rickets; afterwards, he manifested a disposition to almost uncontrollable epistaxis, and to severe hæmorrhage from the tongue, lips, and gums, on the slightest injury. The extraction of a tooth or a slight cut also gave rise to violent hæmorrhage. The fifth, a girl, died suddenly at the age of 18. She is said to have been always pale and very liable to syncope. No disposition to bleeding was observed in her. The sixth, a girl, died in her seventh year from loss of blood. From a few days after birth she was the subject of numerous effusions of blood on the skin of the head, neck, back, and arms; commencing as small vesicles filled with blood, they burst, and caused exceedingly obstinate cutaneous hæmorrhage. The seventh, a girl (now twelve years old) suffered when seven years old from swollen cervical glands, the spontaneous bursting of which was followed by tedious hæmorrhage. She had frequent epistaxis, and bleeding from the gums was easily caused. As yet, there was no sign of hæmorrhage from the genital organs.

After some further comments, in which he examines Kehler's statements, and compares them with his own observations, Dr. Börner sums up as follows.

1. It may be assumed with great probability that hæmophilia occurs in the female sex more frequently than has hitherto been believed; and that more accurate observations on this subject will cause the relative proportion between males and females which has hitherto been accepted, to undergo in time a change unfavourable to the female sex.

2. The cause of the error which has hitherto prevailed with regard to the numerical frequency of hæmophilia in the female sex, appears to us to be, that in girls the diathesis often remains to a certain extent latent, and is frequently first brought into action by fixed causes apparently connected with the period of reproductive activity. (If this be so, it follows that many individuals, who die before this period of other diseases, escape observation on this point; and, on the other hand, that many of the manifestations of the hæmorrhagic diathesis occurring in pregnancy and labour and in the lying-in period are not recognised as such, but, in ignorance of the peculiar individual condition of the



patient in question, are regarded as some one or other of the already familiar anomalies of the period.) How often may not indeed hæmorrhage in a hæmophilic puerperal woman have been quoted as the result of defective involution of the uterus, or fatal flooding simply as the result of atony of the womb.

3. Of the different modes in which hæmophilia is manifested in the female sex, several are of special interest to the gynæcologist. We call special attention to some of these in the subsequent paragraphs, but pass by the hæmorrhages occurring in early childhood, some of which probably belong to this category, but regarding which there is still a controversy. We also omit the bleedings from the genital organs of female infants (on this subject see Kehr's work, page 203).

4. The catamenia of hæmophilic individuals appear not to be normal as regards quantity. Sometimes there is menorrhagia, sometimes vicarious menstruation.

5. As has been already stated in Section 2, the most momentous time for hæmophilic females appears to be the reproductive period, since some of the events occurring in this epoch are the principal causes of the manifestation of the diathesis grounded in the individual, and often not recognised until now. It is also peculiarly the period in which the disease carries off most victims.

6. Coitus may be attended with much more serious results in the hæmophilic than in the healthy individual. Not only, in consequence of the diathesis, may the act be followed each time with slight or more profuse hæmorrhage, but there is also the possibility of fatal bleeding.

7. During pregnancy, profuse metrorrhagia may arise from the diseased state under consideration. Kehr's statements regarding his cases place this beyond doubt. His explanation is, that "in this diathesis, pregnancy gives rise to and maintains changes in the nutrition of the vessels which lead to the occurrence of the hæmorrhages"; of this we want more accurate proof, and in the meantime we explain the fact of hæmorrhage at this point simply by the local conditions present in every pregnancy, which, when the hæmorrhagic diathesis is present, may readily cause hæmorrhages.

8. There is no special disposition to premature interruption of pregnancy in hæmophilic women.

9. As may be easily understood, abortion is accompanied with severe hæmorrhage in hæmophilic females.

10. The period following delivery is one of great importance to hæmophilic women. Here hæmorrhages most frequently occur, which bring the patients into extreme danger, or even cause death. Or the hæmorrhage during the lying-in period may be less remarkable for intensity than for excessive duration, and may cause great weakness to the patient, if it do not lead to fatal anæmia.

11. As regards lactation, not only may this be accompanied each time by bleeding from the genitals, but the nipples themselves may be the seat of considerable hæmorrhage.

12. Fissures of the nipple, which occasionally occur at this time, although much too small to be the source of the hæmorrhage in question, are remarkable for the obstinate resistance which they offer to attempts at healing them.

13. The catamenia of hæmophilic individuals when they return after the lying-in period has passed, are generally normal as regards quantity.

14. The climacteric period may set in with vio-

lent hæmorrhages; and thus on the one hand the completion of this epoch may be considerably prolonged, or, on the other hand, the hæmorrhages occurring during the period may in many cases lead directly to a fatal termination.

15. Certain hæmorrhages from the genital organs of hæmophilic individuals are of interest, which arise from causes that, as a rule, do not produce such an effect in healthy persons. Thus (among mechanical causes) hæmorrhage from the uterus may be caused by simple digital examination, by the introduction of the speculum, by the mere shaking caused by walking, or by the most careful introduction of the uterine sound. Among psychical causes—anxiety, vexation, fright, etc.—may be followed by prolonged and often for a long time irrepressible hæmorrhage.

16. As regards the condition of the genital organs, it is, so to speak, normal in pure cases of hæmophilia, even when there is very abundant hæmorrhage. Like the other mucous membranes of such individuals, the genital mucous membrane presents an apparently excessive fineness of structure, with tendency to serous infiltration, and here and there considerable congestion.

17. A specially successful treatment of the disease is not yet at our command, and we are limited to the remedies ordinarily used in the treatment of other hæmorrhages. Kehr recommends the induction of premature labour as a means of providing against the eventuality of severe flooding in hæmophilic women; but on this point further information seems to be required.

A. HENRY, M.D.

## THE THERAPEUTIC VALUE OF IODOFORM.\*

By DR. J. MOLESCHOTT, of Turin.

FOR many years the application of iodoform or terioidide of formyl has procured in my hands effects so beneficial, that only the desire of studying physiologically the action of this valuable substance has been capable of restraining me from publishing my clinical experience.

It was in 1870 that I was first induced to try iodoform in the case of a scrofulous man, aged about 30. In 1867, I had him several times under treatment for cold abscesses in the right groin and in the back part of the hip of the same side. In September of that year he suffered from swelling of the cervical glands on both sides, those on the left forming an uniform mass larger than a large fist. I treated the patient assiduously from September 1870 to November 1870. Externally, I applied iodide and bromide of potassium, iodated iodide, iodide and biniodide of mercury, chloride of ammonium, belladonna, cicuta, and digitalis; internally, I gave iodide and bromide of potassium, iodised cod-liver oil, mineral waters rich in iodine (Sales water), without neglecting sea-baths. The success was very imperfect. It did not carry out the popular belief, often shared by medical men, that such tumours ought always to yield readily to the application of a simple iodine ointment. The case here referred to was one of the many obstinate ones. The advantages gained after a course of treatment diligently carried out for three years, still left much to be desired. The young man was desirous of being married; but his friends always ridiculed the proposal on account of the deformity caused by the tumour. Stimulated by the desire to free

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him from this, I searched through journals and books, and met with the praises of iodoform; but I regret that I do not remember which author first led me to entertain hope. I prescribed one part of iodoform and fifteen of elastic collodion, to be applied by a brush night and morning. This treatment was commenced on November 20th, 1870; and on December 18th the tumour was reduced to one-half of its size; on February 2nd, 1871, it had almost disappeared; and when I saw him on April 5th, no trace of it could be seen. The patient was then suffering from vesical catarrh, gingivitis, and a little palpitation; and in the next September he had perityphlitis. In March 1871, when the tumour had nearly disappeared, the urine contained albumen for a short time. When he last came to consult me, in October 1877, there had been no return of the glandular swellings or of the cold abscesses. This case did not remain singular in the circle of my practice. Two little daughters of a schoolmaster, aged respectively 8 and 10 years, had for a year and more glandular swellings in the neck, of the size of a large hen's egg. Ointment of iodide of potassium failed. With iodoform, applied in the manner above described, they were cured in a few weeks.

Of many similar cases, in all of which iodoform subdued that which had obstinately resisted iodide of potassium, I relate one which appears remarkable, since the cartilaginous hardness of the tumour had led me to doubt the efficacy of the remedy, in which I already placed much trust. A chambermaid had on the right side of her neck a tumour as large as a middle-sized hen's egg, and as hard as cartilage. She had been disfigured by it for many years; and, although it was not painful, she desired its removal. I applied iodoform in the form of ointment (1 in 15). At the end of three months a very favourable effect was produced; she assiduously followed up the treatment, and within a year the swelling had disappeared.

The last case of this kind which I saw was in a man who had in his right inguinal region a large mass of swollen glands. The tumour, which had commenced with pain, had been treated by a medical man with poultices and incisions. But, in spite of the continued suppuration, the groin remained swollen to such an extent as almost to disable the patient from the discharge of his duties. When this condition had lasted three months, he asked my advice. In four weeks, iodoform ointment effected a complete cure.

This favourable experience of the efficacy of iodoform in combatting swellings of the lymphatic glands, was crowned by the improvement obtained in a case of splenic leucæmia. The subject was a lady whose spleen was doubled in size, and could be easily felt by the hand. Her blood contained one white corpuscle to fifty red, in place of the usual proportion of one to 357. The principal symptoms were prostration, pallor, obstinate diarrhoea, especially severe at the menstrual periods, and a great tendency to acute painful œdema. There was no hæmorrhage, no engorgement of the lymphatic glands. On the other hand, the patient had two attacks of severe pain in the sacrum and last lumbar vertebrae, probably dependent on the participation of the marrow of the bones in the disease. The case might then be considered as one of splenic and myelogenous leucæmia, but remarkable for its severity and long duration. When she first came under my care in January 1870, she had for several months remained in bed. She did not tolerate quinine, nor iron, nor

any other metallic remedy. On the other hand, she obtained advantage from aromatic baths of 26 to 27 Reaumur (90.5 to 92.75 Fahr.), continued for not more than three minutes, and from painting over the region of the spleen with iodoformised collodion; this treatment was commenced in the autumn of 1871. The diarrhoea required appropriate treatment from time to time. Fortunately, the patient's appetite never failed; she could digest venison and other nutritious food. The swelling of the spleen returned several times, but was always restrained by the external application of iodoform. The proportion between the two kinds of blood-corpuscles has for some time become normal.

I do not by any means assert that the remedy for leucæmia has been found in iodoform. The cure is not sufficiently complete, nor the case severe enough; and I have not had an opportunity of trying the same treatment in other cases; but the result of this first attempt seems to encourage further trial.

From the time when I verified the solvent effect of iodoform, I applied it repeatedly in the treatment of the swollen and indurated inguinal glands of syphilis. In these cases I gave protiodide of mercury according to Simon's excellent method, or iodoform in pills, in doses varying from 5 to 10 centigrammes ( $\frac{3}{4}$  to  $1\frac{1}{2}$  grain) in the day; its effects were so salutary, that I can warmly recommend iodoform in the treatment of syphilis.

Judging from the related facts, iodoform, before promoting absorption, should determine the destruction of the primitive elements. This may be said to be its *modus operandi* in orchitis, in which I have several times obtained resolution in a period varying from five to eight days, by the application of iodoformised collodion.

In cases of effusion into serous cavities, iodoform has surpassed my expectation. By painting with iodoform dissolved in elastic collodion, I have seen fluid dispersed which had collected in the pleura, pericardium, and peritoneum, and beneath the arachnoid.

In the case of a lady, wife of a well-known officer, who suffered from insufficiency of the tricuspid valve, I twice obtained absorption of a dangerous pericardial effusion.

At Nervi, some years ago, a gentleman, aged 45, the subject of pulmonary tuberculosis, had ascites to such an extent that he could only remain in a semi-recumbent position on his back, and could not bend his body. I thought that paracentesis would be required, in spite of the anæmic state of the patient. I determined, however, to try iodoformised collodion, giving at the same time diuretic pills. The collection of fluid disappeared in about fifteen days, with an abundant discharge of urine; and it did not return during the remaining year and a half of the patient's life. From that time, I have made it a rule not to advise paracentesis, without having first tried the external application of iodoform. I confess that it is not always efficacious. We cannot be surprised at this, since in many cases we cannot eliminate the cause of the exudation of the fluid, we cannot prevent it from again collecting, and the obstacle to the circulation may be so great that no treatment succeeds in stimulating absorption.

Of all the satisfactory results which I have obtained from the application of iodoform, the greatest has been in the acute hydrocephalus of children. In recent years, I have reported three complete cures among five cases of this fatal disease, two of



which appeared to be in a truly desperate condition. The fixed look, the lost senses, the sopor, the convulsions, the sunken abdomen, the vomiting, the unfrequent pulse, the dilated and unequal pupils, the tonic contraction of the cervical muscles, completed a picture which could be easily recognised. I ordered iodoform, dissolved in collodion, or in the form of ointment, to be applied three or four times daily to the cervical region, and over the mastoid processes, the forehead, and the temples. I must not omit to state that the children at the same time had small doses of calomel, and purgative clysters.

I will here mention a case of prepatellar cystic hygroma. The subject was a valet in a large house, who, having to keep polished the furniture in the rooms, was obliged often to kneel on his right knee. With paintings of iodoformised collodion, the swelling of the bursa in front of the patella was reduced in fifteen days, although it had already existed as many months.

In chronic arthritis also, I have had much reason to praise iodoform. Two cases are particularly memorable. One was that of a little girl nine years old, daughter of a teacher of swimming, who, in April 1875, when I undertook to treat her, had been suffering for nine months with inflammation of the left knee. The suppuration was very diffuse, and the child suffered severe pain and was much weakened. The use of iodoform dissolved in collodion, of iodide of iron in the form of Blancard's pills, and absolute rest, so far restored her that in May 1876 only a slight stiffness of the joint remained.

The other case was one of fungous inflammation of the articulations of the left foot in a boy aged 15. He had been confined to bed many months, and his parents had no further hope. Two very skilful surgeons had declared that there was no resource but amputation; but, his parents not consenting, the patient was removed from the hospital. The left tarsus was about twice as large as the right, and was surrounded by eight or nine suppurating and fungating sores: in more than one spot, the suppuration reached the bone. There was no pain. I had iodoformised collodion applied twice daily to all parts of the foot where the skin remained sound, and the ulcers were first treated with camomile baths, and afterwards with solutions of nitrate of silver (2 to 10 per cent.); iodide of iron was given internally. At the end of a year, the boy could walk, the sores were all healed, the tarsus was scarcely swollen, and all movements were possible, though less free than in the other foot. He had no return of the disease, although he committed several imprudent acts. At present he is able to work; and his parents, who had resigned themselves to seeing him perish, rejoice in the possession of a robust lad.

From all that has been said above, iodoform appears to be a remedy which has a powerful resolvent action, and causes the absorption of formative elements and of collections of exuded fluid. But to these effects it unites the valuable property of assuaging pain. This may be proved in attacks of gout. I have often succeeded in removing or in considerably relieving the most severe pain and other inflammatory symptoms of gout, within twenty-four hours, by painting the parts with iodoformised collodion.

Less certain is the success of iodoform in chronic rheumatism affecting several joints, and I have found it quite unreliable as a remedy against the pain of acute articular rheumatism.

As a sedative remedy, I have used iodoform in a large number of cases of neuralgia, mostly intercostal, cardiac, sciatic, and articular. I have most frequently applied it dissolved in collodion, but have also used it in the form of ointment.

In one case, intercostal neuralgia was accompanied by syphilitic myocarditis, without disease of the valves. The patient, a merchant at Alba, was affected on the slightest movement, even a short walk, with giddiness and spasmodic pain in the region of the heart. He was cured by the internal and external use of iodoform; but he had to continue the treatment with short interruptions for several months. He took internally from 5 to 10 centigrammes in twenty-four hours, in the form of pill.

Patients very often present themselves, complaining of intercostal pain in the region of the heart, radiating towards the left clavicle. Such persons not unfrequently feel palpitation, and fear that they have disease of the heart, although they are quite free from it. These patients are comforted if an opportune treatment free them from their pains; and the external application of iodoform fulfils this object admirably. Along with the pains, the unfounded dread of cardiac disease at once disappears.

Although desirous to avoid making a complete enumeration of the services which iodoform has rendered me, I must make brief mention of a case in which I cured a true neuritis following typhoid fever in a young man, and affecting the trunk of the left sciatic nerve. When the patient sought my help, in the autumn of 1870, his sufferings had already lasted several days. The slightest pressure on the nerve caused intolerable pain; and the patient, who in other respects might be called convalescent, was obliged to remain motionless in bed. The pain was very soon relieved by iodoform; but the leg remained so weak, that for several weeks the patient walked on crutches; and he did not recover perfectly until after a prolonged stay at Nervi.

A remedy which combines in itself antiphlogistic, resolvent, and sedative properties; which embraces a field of action extending from neuritis to neuralgia, from leucæmia to tuberculous meningitis, from lymphoma to collections in serous bursæ, from attacks of gout to hygroma; a remedy which in the multiplicity and energy of its action competes with quinine and with cold water, might be regarded as miraculous, if it had not its defects like every other good thing. Fortunately, however, these defects will not be very detrimental to the services which it is capable of rendering to suffering humanity.

The most important defect in iodoform is its penetrating odour, which is much more perceptible when it is used with collodion than when applied in the form of ointment. Its internal use is sometimes followed by disagreeable eructations. It cannot indeed be said that the odour is repulsive; it is rather oppressive. In the collodion solution, it reminds one of a photographer's laboratory. In order to overcome the objections arising from this odour, the following rules should be followed.

The box of iodoform ointment, or the bottle of iodoformised collodion, should be kept at a distance from the window, in a well-closed tin case; this retards the decomposition of the iodoform, which goes on rapidly in the light. The surface to which it is applied should be covered with a layer of thin gutta percha. Finally, unless its action be urgently required, the application should be made only in the

evening; preference being given to the ointment, which in the morning can be easily washed off with a little soap and water, so as to leave no smell.

Another defect of iodoform is, that it sometimes causes palpitation. I have as yet not often observed this; but it repeatedly occurred in a hysterical lady for whom I prescribed iodoform internally as a remedy for hemicrania. This defect, however, causes me to recognise a conspicuous advantage, which I desire to see confirmed by later experience.

Some months ago, I had under my care a lady, wife of a professor of literature, suffering from mitral insufficiency without compensating hypertrophy of the left ventricle. Irregularity of the heart-beat was the most troublesome symptom of the exhaustion of the cardiac muscle in its attempts to overcome the obstacle. She had *malaise*, diminution of urine, nervous attacks, oppression, and dyspnoea. The radial pulse was often scarcely perceptible. Very small doses of digitalis (30 or 40 centigrammes in infusion, in twenty-four hours) several times produced a sensible improvement; but the stomach did not bear it well, and it therefore became necessary to suspend the use of the remedy before a satisfactory advantage had been obtained. Remembering the experience referred to above, I had recourse to iodoform, which I prescribed in doses of 6 or 7 centigrammes (about 0.9 to 1 grain daily) in the form of pills. The patient had scarcely taken it two days, when I found the heart's action regular and the radial pulse well developed. The heart, which seemed to have given up all rhythm, had regained a regular beat. The same success was repeated several times in this patient, at intervals of various length.

This and similar observations justify us in asking whether iodoform, administered internally in daily doses of five to ten centigrammes, may not compete with digitalis—I mean those small doses of digitalis which render the action of the heart stronger and more regular.

Iodine is found in the urine after the external and the internal use of iodoform, but rather more slowly after the former than after the latter. In either case, the complete elimination of the medicine requires much time, so that traces of iodine may be found in the urine at the end of four or five days.

Allied in constitution to chloroform, iodoform is in many cases a valuable narcotic; but to the quality of relieving pain it adds in a high degree the effects of a powerful preparation of iodine. Neither iodide of potassium nor pure iodine can be compared with iodoform, when we consider its efficacy as a promoter of resolution and absorption of tumours and exudations. It seems probable that the surprising effects of iodoform are to be attributed to the facility with which iodine is liberated from it, so as to act in a nascent state on the elements of the organism.

Notwithstanding the inconveniences which I have not wished to conceal, I dare promise for this remedy a great future.

A. HENRY, M.D.

#### BINSWANGER ON VASO-MOTOR EPILEPSY.

IN the *Berliner Klinische Wochenschrift* for July 1st and 8th, Dr. Otto Binswanger of Breslau publishes an article in which he claims independent re-

cognition for a certain class of cases of epilepsy, under the name of Vaso-Motor Epilepsy. These cases occur perhaps only in connection with epileptic insanity; they are characterised by a typical rise in temperature, by changes in the frequency and quality of the pulse, also by marked diminution of the urinary secretion, with corresponding increase of its specific gravity. Temporary albuminuria may be present. These indications of an affection of the vaso-motor system were, in the author's cases, associated with great mental excitement, usually with irregularly occurring exacerbations of an existing psychosis.

The following is a summary of the arguments and cases which Dr. Binswanger advances in support of his propositions.

Epilepsy has been classed in two ways: (1) with reference to its causation, and (2) according to its symptoms. By the former system, all cases of epilepsy are divided into two great groups: (a) idiopathic or primary epilepsy, in which no external cause of the origin of the disease is apparent; and (b) secondary or reflex epilepsy, which includes all cases in which injuries to the brain, cord, or peripheral nerves have brought about a change in the nerve-centres, productive of epilepsy. That such a change is caused by central or peripheral injuries has been proved experimentally by Brown-Séquard, Schiff, Nothnagel, and Westphal. The three first-named, with Schröder van der Kolk and Kussmaul, have also shown that this change most probably has its seat in the pons Varolii, medulla oblongata, and upper part of the spinal cord; recent experiments by Hitzig tend to prove that the brain-cortex may also be the seat of this change. The second mode of classifying epilepsy has given rise to the grouping of cases under the heads of "status epilepticus", "epilepsia gravior" (*haut mal*), "epilepsia mitior" (*petit mal*), "epileptiform" and "epileptoid" conditions, with the various forms of epileptic insanity, etc.

With regard to the pathological causation of the epileptic fit, Nothnagel believes it to be due to stimulation both of the motor and of the vaso-motor centres. In a typical fit, excitement of the "convulsive" centre and of the vaso-motor centre are co-ordinated; if one of these centres be affected alone, or in a greater degree than the other, this becomes evident in the symptoms of the fit, and justifies the use of the term "motor epilepsy" or "vaso-motor epilepsy", as the case may be. Cases are plentifully on record, in which the mere loss of consciousness without convulsion showed that the vaso-motor centre only was affected. Cases of convulsion without loss of consciousness are more rare; attention is drawn to fits of this kind later on in the paper.

The idea of a vaso-motor epilepsy has proceeded from the knowledge recently acquired of other vaso-motor neuroses, especially of "angina pectoris vaso-motoria", the clinical symptoms of which have been described by Landois and Nothnagel. This disease consists essentially in sudden attacks of arterial cramp, commencing in the extremities, which feel cold, and are the seat of pricking and itching pains; their temperature is diminished, and they become pale and benumbed. The vascular spasm continues to extend; the resistance to the flow of blood through the arterial system is abnormally raised; the innervation of the heart is affected in some way not at present explained; and strong palpitations, pains in the region of the heart, with sensations of tightness, etc., complete the clinical picture.



Several observers have recorded instances of such attacks of angina pectoris becoming developed into true epileptic seizures; the angina has then been regarded as an aura, and the convulsive attack described as vaso-motor epilepsy. The close connection between vaso-motor angina pectoris and epilepsy seems to be further proved by a case reported by Lustig; the patient suffered from the former affection, while his father and brother were epileptics; the patient himself was, during his attacks of angina, so giddy, that he fell to the ground, and eventually had also clonic spasms in both arms.

Nothnagel objects to the term vaso-motor epilepsy being used simply to denote that the aura consists of vaso-motor symptoms, for it would then become necessary to speak of motor epilepsy and sensory epilepsy, according to the form of the aura; besides, he holds that vascular cramp is an essential factor in *all* epileptic seizures. The author of the present paper believes that his use of the term is not affected by these objections, as he restricts it to cases in which the vaso-motor sphere is affected during the attack itself, in a markedly greater degree than the motor centres.

The clinical evidence that the vaso-motor centre is chiefly affected must be sought in morbid changes of temperature, in quantitative and qualitative alterations of the renal secretion, as well as in variations in the frequency and quality of the pulse. Westphal says that an abnormally high temperature is quite an exception in ordinary cases of epilepsy; the urine is generally acknowledged to be increased in quantity after a fit, also to be of a lighter colour, but unaltered in its specific gravity. At the commencement of a fit, the pulse is usually small and infrequent; later on in the attack, it becomes full and more rapid.

M. Huppert has lately stated that each fully developed epileptic attack is accompanied by temporary albuminuria, and that in about half his cases hyaline cylinders were present in the urine after a fit. The author of the present paper carefully examined the urine of twenty insane epileptics for a long period; he only once encountered hyaline casts, and found that albuminuria after a fit only occurred in nine of the cases, and in them it was only occasional.

Among these twenty cases, three were clearly distinct in character from the rest; they exhibited clearly a preponderance in the affection of the vaso-motor system, as described above. In the following histories of these cases it must be remembered that, owing to the patient's insanity and occasional excitement, the temperatures and quantities of urine passed could not always be ascertained. Only those observations are given, which can be fully relied upon. The temperatures were invariably taken in the rectum.

CASE I.—T. S., aged 22, was admitted in August 1876. His father was a drunkard; there was no other hereditary predisposition. The patient had his first epileptic fit at twelve years old; it was ascribed to a fall on the head, which had occurred while he was a child. The fits had gradually become more frequent, and periodical attacks of mania had supervened. In the periods of intermission, a moderate degree of dementia was observable. The patient passed part of his time in staring inactively before him, and at other times did light house-work, mechanically, in the ward. His only complaints were of the "spasms"; he related that, frequently during the day (often as many as

ten times) he felt quite suddenly a spasm pass through his whole body, and everything seemed to swim before his eyes. It was evident that he retained consciousness during the attack, which only lasted a few seconds; he could always say how many he had had during the day, and always described them in the same way. Objectively, the attacks appeared as a single wave of muscular contraction, running instantaneously through the body; the patient sank suddenly upon his knees, and almost immediately got up again recovered. So far as could be observed in the short time available, the muscles were all perfectly hard and in a state of tetanic spasm; the eyes stared forwards, and the face was of a dark bluish-red colour. No aura preceded the attacks; if any occurred during the day, they caused a dull headache.

Every three or four weeks the patient had, in the course of a few days, several typical epileptic fits, accompanied by prolonged loss of consciousness. A feeling of pressure in the epigastrium occurred constantly as an aura. Immediately after a fit, the temperature was always found to be normal.

If the fully developed epileptic fits remained absent for a longer time than usual, the following group of symptoms always appeared in the same order, but with varying degrees of intensity. The patient walked actively up and down the ward, with dark red injected countenance, staring look, and dilated pupils, complaining of headache, buzzing in the ears, and frequent flashes before the eyes. Though usually quite harmless, he was now apt to be violent. This prodromal stage lasted generally only one day; the maniacal excitement would break out in the middle of the night, and he then became very noisy and violent. On the second or third day he had generally become quieter, and was subject to many hallucinations; after four or five days he was quite quiet, but remained in a state of stupor for several days longer; at the end of this time he returned to his usual state, but had no remembrance of what had taken place during his maniacal attack.

The abnormal dilatation of the pupils was very marked throughout the whole attack; the jugular veins were prominent and full, the radial pulse dicrotous, and the carotid still more so. The pulse was from 120 to 128 at these times; its usual frequency when the patient was quiet, and also after his typical epileptic fits, being about 76. The state of the temperature and urine will be seen from the following notes.

March 20th.—Psycho-epileptic attack of moderate intensity. Temperature—a.m., 102.2; noon, 100.8; p.m., 102.9. Pulse, 120; urine, 13 ozs., of specific gravity 1025, neutral, high-coloured, much sediment and traces of albumen.

March 21st.—Excitement continued. Temperature—a.m., 100.8; p.m., 100.4. Pulse, 112; urine, 18 $\frac{3}{4}$  ozs., of specific gravity 1025, neutral, no albumen.

March 22nd.—Patient quieter. Temperature—a.m., 100; p.m., 100.4. Pulse, 96; urine, 25 ozs., of specific gravity 1020.

March 23rd.—Patient quiet. Temperature—a.m., 99.5; p.m., 99.7. Pulse, 92; urine, 37 ozs., of specific gravity 1016, acid.

March 24th.—Temperature normal; urine, 47 ozs., of specific gravity 1010.

March 30th.—Urine, 62 $\frac{1}{2}$  ozs., of specific gravity 1008.

May 25th.—Psycho-epileptic attack. Temperature—a.m., 100.4; noon, 100.6; p.m., 101.8. Pulse, 120;

urine, 18 ozs., of specific gravity 1024, dark, acid, much sediment, no albumen.

May 26th.—Temperature—a.m., 100.4; p.m., 101.1; urine, 22 ozs., specific gravity 1026.

May 27th.—Temperature—a.m., 99.7; p.m., 100.8. Pulse, 112; urine, 28 ozs., of specific gravity 1025, acid.

May 28.—Patient quite quiet. Temperature normal; pulse, 92; urine, 45 ozs., of specific gravity 1020.

June 3rd.—Urine, 72 ozs., of specific gravity 1010.

July 17th.—Maniacal attack. Temperature—a.m., 101.5; p.m., 101.3. Urine, 20 ozs., specific gravity 1025, traces of albumen, neutral, high-coloured.

July 24th.—Urine, 84 ozs., specific gravity 1010.

CASE II.—O. G., aged 27, not hereditarily predisposed, enjoyed good health until seven years of age, when he fell upon his head from a height of ten feet. Eight months later an inflammatory cerebral affection commenced, and from that time his mental faculties were evidently weakened. At thirteen, he had another inflammatory cerebral illness, which lasted six weeks. He was much changed after this. At sixteen, the epileptic fits commenced; they recurred about once a month, and were often very severe. The patient was unable to employ himself, and was usually quite harmless and demented; but he had several maniacal attacks, accompanied by excessive motor excitement. After a continuation of fits, lasting for half-an-hour, in April 1876, albumen was found in the urine. During the last year the maniacal attacks had ceased, and several fits usually occurred within a few days about every seven weeks.

Apparently quite unconnected with this series of fits, the patient suffered at irregular intervals from strong excitement; at these times he appeared quite "lost", spoke and sang loudly, gesticulating freely, tried to escape, was extremely dirty, and occasionally violent. The duration of the attack varied from one to four days; the face was red, the look staring and preoccupied; the pupils were either extremely contracted or abnormally dilated, and changed rapidly from one condition to the other. The patient's urine, under ordinary circumstances, amounted to from 47 to 53 ozs. in the twenty-four hours, and had a specific gravity of 1008 to 1012; during the periods of excitement, it sank to 18½ ozs., but the specific gravity never exceeded 1018. Albumen was never found. The pulse, usually about 72, rose during the attacks to 124. The temperature was always raised, though it is remarkable that, during the patient's attacks of cumulated epileptic fits, this was never the case; at these latter times, the examination of the urine was not practicable. A few detailed observations follow.

March 19th, 1877.—Towards evening, great excitement came on, but diminished at 9 p.m.; the temperature then taken was 104.4; urine high-coloured, copious sediment of urates, specific gravity 1018.

March 26th.—The patient was quite "off"; pupils greatly contracted. Temperature—a.m., 103.1; noon, 102.2; p.m., 100.4.

March 27th.—The patient was better, but still excited. Temperature—a.m., 99.5; p.m., 100. Urine, 31 ozs., of specific gravity 1015; appetite, ravenous.

March 28th.—Excitement quite passed off. Temperature normal; urine, 44 ozs., of specific gravity 1014; appetite, excessive.

April 19th.—Patient rather excited. Temperature, a.m., 101.3.

April 20th.—Patient quiet. Temperature normal.

April 23rd.—Again excited. Temperature—a.m., 101.3; p.m., 100.8.

April 24th.—Temperature—a.m., 99; p.m., 99.7.

June 19th.—Temperature—a.m., 100.4; p.m., 100.

June 20th.—Temperature—a.m., 101.4; p.m., 101.3. On these two days he was much excited.

June 22nd.—Temperature—a.m., 99.7; p.m., 99.7.

June 24th.—Temperature—a.m., 99.9; p.m., 100.4.

June 25th.—Temperature—a.m., 100.4; p.m., 101.3. On these two days he was greatly excited.

June 26th.—Temperature—a.m., 99.7; p.m., 100.

July 23rd to 30th.—There was continuous excitement; evening temperature on July 28th, 101.7.

CASE III.—E. H., labourer, aged 36, was said to have been epileptic since six years of age. The patient was much demented, quarrelsome, and irritable. The fits occurred irregularly, about every three or four days, and frequently several on the same day. The injected countenance of the patient was very noticeable; also the full, rapid pulse, which was often dicrotous, and the abnormal dilatation of the pupils. The vaso-motor symptoms never appeared in any regular sequence, but depended entirely on outward circumstances. Any strong emotion or exacerbation of the delusions was always marked by considerable variation in the quantity of urine secreted. If, during the period of psychic excitement, one or more epileptic fits occurred, there was always a decided, though moderate, rise of temperature.

The daily quantity of urine usually passed varied between 34 and 44 ozs., with a specific gravity of 1016 to 1018.

April 25th, 1877.—It sank to 12 ozs., specific gravity 1029; was of a dark red colour, acid, and without sediment or albumen. The patient was violently excited. Evening temperature, 100; pulse, 80.

April 27th.—Angry excitement. Urine, 18½ ozs., specific gravity 1026, acid and high-coloured. Temperature normal.

April 28th.—The same state. A strong fit at mid-day. Temperature, immediately afterwards, 101.3; p.m., 100.4. Pulse, 112; markedly dicrotous; urine, 18½ ozs., of specific gravity 1026, neutral, no albumen.

April 29th.—Temperature again normal; urine, 22 ozs., of specific gravity 1024, acid.

April 30th.—Urine, 28 ozs., of specific gravity 1016, acid.

May 7th.—Three fits last night. Temperature normal.

May 8th.—Urine, 20 ozs., of specific gravity 1026, acid.

June 7th.—Excited; three fits in the afternoon. Temperature, p.m., 101.5; urine, quantity doubtful, specific gravity 1028; pulse, p.m., 120.

June 8th.—Temperature normal; urine, 28 ozs., of specific gravity 1020.

June 26th.—Excited; two fits in the afternoon. Temperature, p.m., 101.1; pulse, 112.

June 27th.—Temperature normal; urine, 31 ozs., of specific gravity 1020, acid.

July 19th.—Excited and fighting; one fit in the morning. Temperature—a.m., 100.9; p.m., 100.4. Urine, 20 ozs., of specific gravity 1024, acid.

July 20th.—One fit in the morning. Temperature—a.m., 101.3; p.m., 100.2.

July 21st.—Temperature—a.m., 99.3; p.m., 99.5.

July 22nd.—One fit in the afternoon. Temperature—a.m., 100.4; p.m., 99.7. On each of these three days he was excited.

On the following days the temperatures were normal.



October 6th to 9th, similar excitement with epileptic fits on the 8th, and an evening temperature of 101.1; pulse, 116. Urine on the 9th, 22 ozs., of specific gravity 1025, acid. 10th, 31 ozs., of specific gravity 1019, acid, and of a bright red colour.

The rise of temperature, constant diminution in the quantity of urine with increase in its specific gravity, the full, frequent, soft, and often dicrotous pulse, which followed, in Cases I and II, the psycho-epileptic attacks, and, in Case III, the ordinary epileptic fits which occurred during psychic excitement, are symptoms usually described by the term *fever*. The first time that the author saw one of these cases, he thought he had to deal with an acute febrile disorder. During the attacks, the patients were frequently most carefully examined: no organic disease was ever detected; but dyspepsia, coated tongue, loss of appetite, and constipation were always present.

The influence of psychic impressions upon the vaso-motor system has long been recognised; it is only necessary to mention the paleness due to fright and the flushing of the countenance caused by joy. The observation of Landois, that angina pectoris vaso-motoria occurs chiefly in nervous, easily excitable persons, is also interesting. This influence must have great power in the insane, whose affective faculties are most sensitive and subject to the action of various hallucinations, etc. The permanent condition of "increased irritability" of the nervous centres, which is caused by epilepsy, is probably also an important factor in the cases under discussion.

In Case III the influence of severe psychic excitement is very evident.

For the first two cases another explanation is possible, but is only offered as a suggestion. Bourneville and Obersteiner have shown that the "status epilepticus" is accompanied by a rise of temperature, sometimes to as high as 107°. The cases now described may, perhaps, be the psycho-epileptic equivalents of the "status epilepticus" and be regarded as instances of "status vaso-motorius". Case II is reported as having once suffered from "status epilepticus" for half an hour; unfortunately, no observations of temperature at that time were obtained. In both cases, the disease was ascribed to injuries to the head, and in each case several fits always occurred in quick succession, so that it is quite likely that in the first case also, a status epilepticus may have occurred, or might occur at any time. It was found, however, that the vaso-motor symptoms never accompanied the series of fits unless when psychic excitement was also present. That the attacks of *petit mal*, or rather of extremely rapid motor epilepsy, noticed in Case I, may have relieved the epileptic tension in the nervous centres, and so have prevented the disease reaching to a motor epileptic "status", is at least possible.

The question, whether the vaso-motor symptoms observed are to be ascribed to stimulation or to inhibition of the vaso-motor centre, presents many difficulties. The soft, full, rapid pulse; the easily compressible radial artery; and the rise of temperature, point to the latter. The concentrated urine points to the increased excretion of water by other organs; in Case I, profuse sweating several times accompanied the vaso-motor attacks. All three cases had, during the attacks, marked redness of the surface, and a soft, moist skin. On the other hand, the decrease in the quantity of the urine might easily be regarded as due to contraction of the renal ves-

sels. The prevailing abnormal dilatation of the pupils would seem to be due to stimulation of the sympathetic. Owing to the defective state of our knowledge as to the relations between vascular tone and the action of the heart, the increased frequency of the pulse does not afford any decisive proof either one way or the other.

CHARLES S. W. COBBOLD, M.D.

## HILLAIRET ON THE TREATMENT OF LUPUS.

M. HILLAIRET (*Le Progrès Médical*, October 12) says: In treating lupus, attention should always be given to a scrofulous diathesis and its manifestations, in other words, the treatment should be at the same time general and local. The Germans, who do not believe in the scrofulous nature of lupus, pay but little attention to general treatment. Nevertheless, Hebra employs cod-liver oil, while he declares he has no confidence in its action. In France, many medicines are prescribed, not cod-liver oil only—quinine wine, the different preparations of iron, and particularly the syrup of the iodide, with the intention of obtaining an improvement in the general state of the patient. Other remedies less used have been equally praised, but, I should say, do not seem to give such good results, such as phosphate of lime, arsenic, hemlock, which M. Bazin employs for a long time. He advises also arsenical waters. Amongst these last, the best without doubt are the waters of Bourboule. Sulphur waters, chlorine waters, sea-baths, and soda, have also been advocated. Iodide of potassium has been reserved for certain varieties of lupus for which it is particularly suited. In conjunction with good food, a healthy habitation, and, in one word, good hygienic conditions, these means render incontestable service, and in most cases hasten the cure of the patient; sometimes, also, particularly in patients with lupus erythematosus of small extent, they are all sufficient. Fortunately I can prove this. We have a young man with lupus erythematosus on his left cheek. This is now almost entirely healed, and the improvement is due entirely to the general treatment which only has been employed. Oftener it is necessary to have recourse to direct agents, and to act on the affected surfaces. Tincture of iodine can then be serviceably employed; Vienna paste, Canquoin's paste, chromic acid, acid nitrate of mercury, have also been recommended. I prefer the employment of chloride of zinc to the actual cautery, as it produces less loss of substance and less deforming cicatrices. But it should not be forgotten that lupus is due to an inflammatory process, and that, in a great number of cases, poultices should be employed which temper the action of the caustics, and exercise a soothing influence on the ulcerated surfaces. Of the new methods which have been employed with success, I wish to say a few words on scraping, acupuncture, and linear scarifications.

It was Veiel who first introduced acupuncture. The method consists in pricking the surface of the lupus with needles, either in bundles, or fixed in the same handle, but separated from one another by some millimètres. These needles before being used should be heated to a red colour. This plan is, however, at the present time much less employed than the scraper and linear scarification. Volkmann invented the scraper, and published his proceeding

in 1870. It consists in scratching the surface of the lupus with curettes of different shapes, but generally of small dimensions. It is necessary, in order to aid the action of the instrument, to raise up all the lupoid tissue, and one may be satisfied with the result when the curette comes upon more resisting parts; this is healthy tissue; the operator should then stop. It is generally necessary to repeat the operation one or more times a month until the healing of the lupus is complete. Volkmann and Hebra both advise cauterisation of the scraped surfaces with nitrate of silver. This method of Volkmann's gives very good results, but it is not applicable to all cases of lupus, and I more often employ linear scarification. To practise this, a needle, slightly flattened, with sharp edges, may be used. Or, following the example of Balmanno Squire, a scarificator with numerous blades, which he has expressly constructed, may be used. Personally, I find the needles most easy to manage, and I make the linear incisions separated by a few millimètres. I place my incisions in such a way that some are perpendicular to the others, and I repeat the operation one or more times a month, until the lupus is well. I have obtained by this practice very good results, and I believe that this method is destined to be of great service. It offers one inconvenience; that is, it gives rise to hæmorrhage, which may be very abundant, and in patients with frail constitutions this may be injurious. I should say a great deal of this loss of blood may be avoided by applying to the lupoid surfaces, before operating, some convenient anæsthetic, and afterwards by the immediate use of perchloride of iron; this may be simply done by means of a piece of blotting-paper, as recommended by Balmanno Squire. Another recommendation of linear scarification is, that it can be more easily and more promptly repeated than cauterisation.

Perhaps the surgical treatment may appear too energetic for a disease which often at the onset seems but trivial. But there should be no hesitation in employing it, for it should be remembered that an essentially rebellious affection has to be contended with, one that is always progressing, though but slowly, and is apt to leave deforming cicatrices and capable of rendering those unfortunates who are attacked objects of repulsion and of horror to their fellow beings.

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## ANATOMY AND PHYSIOLOGY.

PREVOST ON PHYSIOLOGICAL ANTAGONISM.—M. J. L. Prevost, in the *Archives de Physiol. Normale et Pathol.*, 1877, p. 801, treats of this subject chiefly in relation to the antagonistic properties of atropin to muscarin. A very fair bibliography of the general question is first given, and the author then proceeds to show that there are the following kinds of antagonisms, adopting the classification of MM. Rossbach and Fröhlich: *a.* True antagonism, occurring in cases in which two poisons act in opposite ways upon one and the same anatomical element, as, for instance, by exciting or paralyzing a nervous element; *b.* False antagonism, when the poisonous symptoms are suppressed by making use of an agent which renders the manifestation of the symptoms impossible; this occurs after the injection of curara, in a case of strychnia poisoning; for the curara, paralyzing the motor or efferent nerves, pre-

vents the appearance of tetanus caused by strychnia. Another example of false antagonism is, when two poisons act upon two different parts of a complicated organ; as is the case when atropin and physostigmin are applied successively to the eye.

As is known, muscarin and atropin are two poisons which stand in true and direct antagonism to each other. Muscarin has been synthetically formed by MM. Schmiedeberg and Harnack, by transformation of cholin or neurin. It is a powerful poison, three milligrammes of the pure substance killing a cat, the symptoms being the following. *a.* There is excessive secretion of all the glands, except the kidney, whose function appears to be lowered. The poison acts directly upon the glands themselves, and not through the central nervous system. *b.* The pupil is greatly contracted, if the muscarin be in the blood; the contraction, however, is not due to paralysis of the sympathetic. *c.* The peristaltic action of the intestines becomes very violent; and the other organs provided with unstriated muscles also undergo contraction; though to a less extent. *d.* The heart is arrested by prolongation of the diastole; the blood-pressure is lowered; and the respiration is paralysed. These symptoms are entirely and immediately done away with by the injection of atropin. The power of atropin, as an antidote to muscarin, is said to depend upon the fact that atropin paralyzes the terminal fibres of the nerves which are excited by muscarin; M. Prevost, however, states that, in animals into which atropin has been injected, strong local injections of muscarin are able to reproduce locally symptoms of muscarin poisoning, and that too in spite of the presence of atropin; and he has been able to cause these phenomena to re-appear several times after they have been several times set aside by atropin. It should be stated that animals are but little affected by the properties of atropin which are so poisonous in the case of man. It is probable that muscarin would be of service in some of the numerous cases of poisoning by atropin.

HOFMANN ON THE FORMATION OF HIPPURIC ACID IN THE KIDNEYS.—Arthur Hofmann, in the *Archiv für Exper. Pathol.*, etc., Band vii, explains that Bunge and Schmiedeberg already knew that more hippuric acid was present after the ingestion of glycocoll and benzoic acid, than when benzoic acid alone was administered. Relying on this observation, the author has striven to show that the amidic acid unites with the benzoic acid. For this purpose he gave, instead of glycocoll, another amidic acid—alanin or amido-propionic acid—which is not found in the body, and whose compound with hippuric acid has not been previously known. The benzoic acid and alanin were dissolved in equivalent quantities in blood, and experiments were made with this fluid and transmitted through the kidneys. Hippuric acid was thus obtained, which differed somewhat from the normal; it amounted to 0.3975 grammes. The research, however, was not continued. The attempt to form an analogous acid from leucin gave no results. Hofmann decreased the numbers of blood-corpuscles in the blood by diluting, to decide whether the blood-corpuscles as such were necessary to the formation of hippuric acid, or whether it was due to the hæmoglobin alone, acting as an oxygen-carrier. An injection, even under great pressure, was unsuccessful, the capillaries refusing to transmit the fluid. No formation of hippuric acid occurred when the blood was



saturated with carbonic acid instead of oxygen, although the kidneys did not lose their capability of forming hippuric acid, even after blood charged with carbonic acid had been passed through them for two hours. Further investigations were directed to decide whether the capillaries of the kidney lost their power of forming hippuric acid, after the administration of poisonous substances. The investigator chose quinine for this purpose, as Binz has shown that it has a deleterious action upon cell-protoplasm. The influence of the kidneys on the blood passing through them was extraordinarily lowered, if not completely abolished, by the action of the quinine. The results of Schottin, as well as those of Meissner and Shepard, asserting that no hippuric acid appeared in the sweat after the ingestion of benzoic acid, have been confirmed by Hofmann; to this is added the statement that, after ingesting benzoic acid and hydrochlorate of glycocoll, neither hippuric acid nor benzoic acid was found in the sweat; but hippuric acid, and in one case a little benzoic acid, was detected in the urine.

**HENNIGER ON THE NATURE AND PHYSIOLOGICAL ACTION OF PEPTONES.**—The researches of M. A. Henniger upon these subjects (*Le Progrès Médical*, Sept. 21) tend to show that there are as many peptones as albuminoid substances. Instead of purifying peptones already formed, M. Henniger has set himself to work to purify the proteids which are about to be converted into peptones, and he only employs sulphuric acid in his digestions, as this acid can easily be precipitated with baryta. By this means, he endeavours to eliminate those sources of error which are introduced by the salts and the reagents. With materials thus purified, M. Henniger finds that peptones will dialyse. The rotatory power of peptone formed from albumen differs from that formed from fibrin. The peptones formed from albumen and casein have for the first time been analysed; it is found that they contain less carbon and nitrogen, but the same proportion of hydrogen as the proteids from which they were formed. M. Henniger's theory of the formation of peptones, drawn from the conclusions just given, is in agreement with that of Wurtz and Hoppe-Seyler, that peptones are produced by the hydration of proteids. They are produced by the action of the ordinary hydrating agents, boiling water, weak acids, and ferments; this hypothesis is powerfully supported by the author's analysis of the peptones formed from albumen and casein just mentioned. Another argument in its favour is, that it has been found possible to recover a true proteid analogous to santonin, by treating the peptone derived from fibrin with a hydrating body, such as acetic acid. The author very ingeniously compares these facts with the analogous hydrations which transform the ureids, or bodies which can be converted into urea by oxidation, into alloxanic and oxaluric acid. This comparison is the more pertinent, since M. Schatzenberger has shown by graduated decompositions that the proteids are complex ureids. Peptone will thus be the first link of the long chain, which begins with albumen and terminates with urea. Plozz, Adamkiewicz, and others, have shown experimentally that animals fed upon peptones increased in weight, and assimilated carbon. The value of such experiments from a therapeutic point of view is thus obvious, for they show that, in affections of the stomach, peptones should be administered. Leube has proposed to treat certain diseases of the large intestine with a paste composed of pancreas, meat,

and fat. Three patients, suffering from cancer, upon whom this method was actually tried, were kept alive for a very long time.

**ALBERTONI ON THE ACTION OF PEPSIN UPON LIVING BLOOD.**—Dr. Albertoni, of Padua (*Centralblatt für die Med. Wissenschaften*, Sept. 7, 1878), has experimented with small dogs, by injecting into their femoral veins a definite quantity of a solution of pepsin and hydrogen chloride. It is already ascertained that the ferments of the stomach and intestine are absorbed, for Brücke extracted them from the kidneys and muscles; Grohe recognised that a diastatic ferment formed in the intestine existed in the chyle, and Maggiorani that there was a ferment in chyle. The conclusion at which Dr. Albertoni has arrived, is that blood, drawn from a dog after the injection of a sufficient quantity of active pepsin, coagulates much more slowly and imperfectly, and yields a considerably smaller quantity of fibrin, than did the same blood before the injection of the pepsin. That this result is due to the ferment alone, is shown by the fact that the solution of pepsin, which had previously been found to be active in the way described, was inactive after it had been boiled. In every case, however, the blood retained its alkaline reaction. The author has found paraglobulin in considerable quantities in the blood which remained fluid after the injection of the pepsin. If the quantity of pepsin used be insufficient, or if it be not very active, the difference of the interval of time of coagulation, and the amount of fibrin produced from the normal, is reduced to a minimum. None of the animals into which pepsin was injected showed any alteration in the condition, and everything argues for the fact that the point in question is one of physiological detail. The action of the digestive elements, which has hitherto been supposed to be confined to the alimentary tract, is now shown to be spread through the blood and tissues, where it probably plays no mean part in the processes of metabolism. The absorption of pepsin occurs but slowly under normal conditions, and it is therefore never found in the blood in sufficient quantity to bring about the changes in coagulation, and in the amount of fibrin produced, which have been above mentioned.

**CHAUVEAU ON THE RAPIDITY OF THE PROPAGATION OF STIMULI IN THE MOTOR NERVES OF THE RED VOLUNTARY MUSCLES.**—The conclusions at which M. Chauveau (*Acad. des Sciences*, Aug. 5, 1878) has arrived, are these. Direct stimulation of the muscles of the œsophagus, above and below the neck, excites contractions of the same kind, of the same extent, and originating at the same spot, in relation to the instant of stimulation.

If the vagus be stimulated above the point of origin of the motor nerves of the œsophagus, the contraction of the lower part of the œsophagus appears at a very perceptibly later period than the contraction of the upper part. The amount of this retardation, due as it is to the difference in length of the nerves supplying the two parts, supplies the data for the determination of the rapidity of the propagation of stimuli in the motor nerves of the cervical portion of the œsophagus. The rapidity of propagation in these nerves is only eight mètres per second, against 65 mètres or even more, which is the rapidity with which stimuli are propagated in the motor nerves of the larynx and face. The motor nerves of involuntary muscles transmit stimuli about eight

times less rapidly than nerves supplying muscles of identical structure, which differ in being under the influence of the will.

**LANGER ON THE BLOOD-VESSELS OF THE CALVARIA AND DURA MATER.**—Professor Langer, as Dr. Dwight (the *Boston Medical and Surgical Journal*, 1878, p. 341) shows, has found a new anastomosis between the systems of the internal and external carotids, consisting of a branch of the anterior cerebral, which leaves that artery where it turns over the front of the corpus callosum, and runs on the falx to meet descending branches of the meningeal arteries. Sometimes a second vessel is given off further back. The foveolæ glandulares, or Pacchionian depressions, are caused directly by the varicosities of the veins of the meninges and of the bones. A thick venous network on the outer side of the dura mater is also described; into it the veins of the diploë open, and it is in immediate communication with another network of fine arterial twigs. There are no intermediate capillaries, but the arteries open into the veins by conical communications. In the canals of the diploë are both arteries and veins, which join without intermediate capillaries. Very minute vessels connect the spaces of separate bones, running through the cartilage of the sutures even in childhood. Professor Langer's paper is published in the *Denkschriften der Kaiserlich. Akad. der Wissenschaften*, Wien, Band xxxvi.

**LIVON AND CAZENEUVE ON THE EPITHELIUM OF THE BLADDER.**—Drs. Livon and Cazeneuve report to the French Association for the Advancement of Science (*Archives Générales de Méd.*, Oct. 1878), that urinedialyses rapidly if the epithelium of the bladder be destroyed. The dialysis requires four or five hours if the epithelium be intact, and from seven to ten minutes if the inner surface of the bladder have been scraped. The most favourable temperature for exhibiting these phenomena of dialysis is 25 to 33° Cent. (77 to 86° Fahr.). During digestion the dialysis occurs in three or four minutes, but after fasting it is more rapid. If renal lesions be made, the dialysis appears in twenty or thirty minutes; if the animal be intoxicated with cantharides, and the experiment be delayed till the inflammatory symptoms become chronic, the dialysis takes place in twenty minutes. The subject is one of considerable importance, and the results thus arrived at agree well with clinical observations, for it appears that the urine becomes concentrated during its stay in the bladder, and does not entirely preserve its composition.

D'ARCY POWER.

**TARCHANOFF ON THE DEVELOPMENT OF PSYCHO-MOTOR CENTRES.**—M. Tarchanoff read a paper at the meeting of the Société de Biologie on June 24th (*Gazette Hebdomadaire*), on the development of the psycho-motor centres in various animals. Sohlman has concluded, from experiments on dogs and rabbits, that these centres appear about the tenth day after the development of the senses, and he infers that the action of external agents is needful for their development. Besides, the brain of a new-born child differs greatly from that of an adult anatomically as well as chemically. M. Tarchanoff has demonstrated that the brain is more developed and the cranial bones more resisting in animals which have perfect locomotion and the use of their senses from birth (hedgehog). The power of modifying reflex action (possessed by the psycho-motor centres) exists in these animals soon

after birth, whilst in the rabbit it does not appear till later; thus, irritation of the vagus arrests the heart's action in the hedgehog, whilst in the rabbit it has no such effect. Anatomically, the differences are also marked; in the first mentioned the grey substance is more vascular, it contains giant-cells and also pyramidal cells; the brain of the rabbit is less vascular, there are few giant-cells and no pyramidal ones, besides which the nerve-fibres generally contain no myelin. M. Tarchanoff thinks that these differences are caused rather by the intensity of nutrition than by its duration, having proved that development of the functions of the psycho-motor centres is accelerated by giving phosphorus to new-born rabbits, or by placing the animal with its head downwards so as to produce cerebral hyperæmia.

## MEDICINE.

**HOLST ON A CASE OF NEUROSIS DUE TO FRIGHT (SCHRECK-NEUROSE).**—This paper, by Dr. V. Holst, occurs in the *St. Petersburger Medicinische Wochenschrift* of the 12th (24th) August 1878.

While other departments of pathology have been, during the last decade, built upon physiological and anatomical substrata which have served as the bases of systematic classification, in the department of neuro-pathology, including psychiatry, this is not yet possible, or, at any rate, only very partially so. Our knowledge of many diseases of the nervous system is, as yet, purely clinical; among these last, many present well-defined and recognised groups of symptoms, and have therefore received clinical names; but, besides these, there are a number of cases which occur in the most varied form and guise, so that they cannot be grouped under any recognised name; it is for these that the name neurosis is most useful. By neurosis is meant a nerve-affection, unexplained by pathological anatomy and not capable of being classed under the name of any recognised disease. A neurosis may be more definitely described by speaking of it in relation, either with the anatomical structures most influenced by it (e.g., vaso-motor neurosis), or with the cause to which it is due (e.g., emotion-neurosis, fright-neurosis). The above observations justify the title given to the paper.

It is universally admitted, that powerful psychic emotions, especially fright, are frequently the cause of the most various nervous disturbances. An interesting series of such cases which occurred during the siege of Strasburg, is given by Dr. Kohts in the *Berliner Klinische Wochenschrift*, 1873. All the cases there described were capable of being classed with recognised diseases of the brain or spinal cord, as were also the cases of "emotion-neurosis," described by Berger in the *Deutsche Zeitschrift für Pract. Med.*, 1877, Nos. 38 and 39. The case now to be described cannot be given any clinical name; it can only be called a neurosis; noteworthy points in it are its rapid course and evident cure by a fresh psychic impression.

A labourer, aged 60, stated that he had always enjoyed good health, but was always very susceptible of fright; he had frequently suffered from rigors as a result of sudden fright; but these quickly passed off under the influence of a little diffusible stimulant. Once he had an attack of erysipelas in the leg, which he also ascribed to fright. He had never been intemperate in his habits. One day last March



he was greatly frightened by one of his children letting fall a toy from the table, and at the same time shrieking loudly. He at once suffered from an attack such as will shortly be described. The attacks were repeated, with very short intervals, until he was admitted to hospital two days later. Dr. Holst found him walking about in the ward, and had hardly begun to converse with him as to his complaint, when the patient was suddenly stopped in his speech by a fearful grimace; his mouth was widely opened, the eyes became staring, and he uttered a hollow groan. His arms were spread out, and he seized hold of any neighbouring object. On one occasion this was the physician's leg. The patient then stood firmly for a time with somewhat bent knees, and was evidently unconscious. In one or two minutes the groan changed into loud weeping; then, quite suddenly, the patient's expression became normal, he looked about him with an astonished air, passed his hand several times over his eyes, and said, "Now I am all right again". He was again quite conscious, and answered questions intelligently, but could only describe his attack by saying that something came over him, and that he became unconscious. During half an hour's observation, attacks continued to occur at intervals of from three to five minutes. The individual attacks varied somewhat in form, in that the distortion of the countenance was not always the same; sometimes the patient uttered no sound, and occasionally the attack commenced with an unnatural laugh. The end of the attack was sometimes characterised by quite a remarkable look of utter astonishment; at other times it came on more gradually, the weeping passing into a loud-spoken prayer, with devoutly uplifted arms, during which consciousness had evidently returned. After Dr. Holst had observed a number of these paroxysms, the idea occurred to him to try what would be the effect of a new psychic impression upon his condition. In the middle of an attack, the doctor suddenly ran to his patient, shaking him violently by the arm, and shouting loudly to him, "What has come to you? How dare you misbehave yourself in this way?" He instantly became conscious, looked at the doctor in astonishment, and respectfully asked if he had given any offence. After a short time, another very slight attack occurred; the same procedure was adopted; and the patient, rubbing his eyes, asked what had happened to him. He was then left, no other treatment being ordered. Next day, he was reported to have had no return of the paroxysm. When the doctor entered the ward, the patient at once came and thanked him heartily for having freed him from his trouble. On being asked what had occurred the previous day, he said he only knew that the doctor had come into the ward and frightened him very much, and that this had cured him of his dreaded fits. He also stated that he had felt several slight paroxysms since the previous day; they consisted, however, only in a slight trembling, which, being fully conscious, he was able to overcome without their being noticed by the persons around him. On the next (third) day, as no further symptoms had been presented, he was discharged cured.

**GALLOPAIN ON INTRAVENTRICULAR CEREBRAL HÆMORRHAGE.**—Dr. Gallopain (*Gazette des Hôpitaux*, 1878, No. 49) finds that out of ninety recorded cases of intraventricular hæmorrhage, convulsions are mentioned as having occurred in fifty-one cases. He considers that tonic or clonic spasms coming on

immediately or soon after the apoplectic attack afford a strong presumption of hæmorrhage having taken place into one or both ventricles. These convulsive attacks usually cease after three or four days, and must be carefully distinguished from the convulsions which sometimes commence one or two months after an apoplectic seizure.

As regards the causation of the spasmodic attacks, the author thinks they are due to irritation of the optic thalamus, either by the rupture of a vessel in the thalamus itself, or by the irritation of the blood upon its surface.

**MARTINEAU ON NERVOUS TROUBLES ACCOMPANYING UTERINE AFFECTIONS.**—Martineau (*Gazette des Hôpitaux*, 1878, No. 64) says that, in the majority of cases the morbid conditions resulting from uterine disease are due to disturbances of the nervous system. Among the most notable are neuralgia supra-orbitalis, maxillaris, and laryngo-bronchialis (uterine cough); also neuroses of the heart, causing painful palpitations, and spasmodic contractions of the bladder and bronchi (uterine asthma). All these symptoms become aggravated at the time of the commencement of the menstrual flow. The author observed one patient affected with this kind of asthma, who had long passed the climacteric, but whose asthmatic attacks were always most severe at the times at which the menses used to appear. Ordinary asthma also becomes worse under the influence of uterine disease.

Uterine affections frequently give rise to spasm of various muscles and to paralysis of one or both lower limbs. Both of these conditions usually come on very gradually, and they never become complete.

The peripheral reflex irritation caused by uterine diseases often acts, in conjunction with other causes (*e.g.*, hereditary taint, defective nutrition, domestic trouble, etc.), in giving rise to mental disease.

CHARLES S. W. COBBOLD, M.D.

**CHARCOT ON HYSTERO-EPILEPSY.**—M. Charcot, in a paper read before the Société de Biologie, July 15 (*Progrès Médical*, July 27) shews that hystero-epilepsy, hysteria major, presents a type which, apart from secondary variations, remains always identically the same in its chief features. The attack can be divided into four periods preceded by an *aura*. The first stage is epileptoid, and does not differ from the comitial malady except in being susceptible of control by ovarian pressure or the electric current; it passes through a tonic state, to which succeed clonic spasms. After a temporary remission the period of *contortions* commences, at the time when the first hallucinations are produced. The third stage is that of *passionate attitudes*; the face expresses joy, terror, pleasure, the patient recalls her friends, or remembers her enemies. In the last stage the patient, having come again to herself, is still under the influence of the temporary hallucinations; then little by little these latter phenomena disappear.

ROBERT SAUNDBY, M.D.

**SKERRITT ON THE LATENCY OF SYMPTOMS IN ACUTE ABDOMINAL DISEASE.**—In the *British Medical Journal*, August 1878, p. 308, a paper by Dr. E. M. Skerritt gives the history of a case of a woman, aged 47, with complete obstruction of the bowels for seven days. During the five years previously, there had been three similar attacks. There was a total absence of acute symptoms; no anxiety, no pain; the pulse was good; the tongue perfectly

clean; the abdomen was much distended; no vomiting. Two days after admission into the Bristol Hospital, symptoms of perforation suddenly set in, and the patient died. On *post mortem* examination, there was no mechanical obstruction; but intense peritonitis existed; over the cæcum and adjacent parts of the colon, the peritoneum was mottled with dark ecchymoses and greyish-black gangrenous patches; and inside this portion of the gut were deep gangrenous ulcers, with sloughy and blackly ecchymosed bases and edges. The obstruction was caused by cessation of peristaltic action, due to intense peritonitis.

**GOWERS ON CASES OF UNIVERSAL ALOPECIA AND EPILEPSY.**—Dr. Gowers reports in the *Medical Times and Gazette*, September 1878, p. 379, two cases in which universal alopecia was associated with epilepsy.

**CASE I.**—W. G., a man, aged 54, had suffered from epilepsy four years. At eleven years of age, his hair came off in patches from his head after rheumatic fever, and gradually, at thirty, he was quite bald. At forty years of age he lost his whiskers, and subsequently his eyelashes and eyebrows and body hair. There was no history of syphilis, or of hereditary nervous disease. His first epileptic fit occurred at the age of fifty.

**CASE II.**—A man, aged forty-nine, had had epileptic fits, when first seen, for five years. No history of syphilis or family neurosis could be obtained. The loss of hair, which was universal and complete, occurred at the age of twenty-five, soon after a severe illness. The fits began a month after an injury to the head. Dr. Gowers remarks that the rarity of universal alopecia makes it a little doubtful what significance is to be attributed to the coincidence of the two conditions of cutaneous and neurotic disturbance; but facts are not wanting which suggest that the coincidence is not an accidental one. In each case, the epilepsy occurred late in life, long after the alopecia was complete. Cases are recorded which point to a disturbance of the nervous system as a cause of alopecia; one, for instance, on which universal loss of hair followed an injury to the brain. The undoubted influence of emotion upon the colouring matter of the hair is closely connected with the function of the nervous system.

[In the LONDON MEDICAL RECORD, May 1878, p. 220, a paper by Dr. Cumming on Alopecia Areata, published in the *Practitioner* for February 1878, is referred to, wherein it is stated "I think we may reasonably regard this disease as a *neurosis*".—*Rep.*]

**LLOYD ON EXTENSIVE DESQUAMATION FOLLOWING ACUTE PNEUMONIA.**—Mr. G. Jordan Lloyd reports in the *Lancet*, September 1878, p. 329, his own personal experience, that well-marked desquamation may follow other diseases than scarlatina.

On October 4th he was seized with a severe attack of croupous pneumonia, which ran its course to the eighth day, when the crisis was accompanied by a thick crop of sudamina, spreading all over the body, and on the fifth day of the eruption presented much the appearance of confluent small-pox. On the ninth day, desquamation commenced, and was not finished for two months. The possibility of scarlatina complicating the attack was excluded.

[During the recent epidemic of diphtheria in the north-western district of London, a case came under the reporter's notice, where one out of several mem-

bers in a large family so attacked, had free desquamation of the whole surface. The medical attendants of the young lady asserted that the case was purely diphtheria, and that there was no scarlatinal poison, and allowed her to mix with others, and to leave for Brighton in the active stage of desquamation, and, so far as the reporter knows, without any ill effect; friends of the patient, however, who were under his own care, were not allowed to be exposed to the apparent risk.—*Rep.*]

RICHARD NEALE, M.D.

## RECENT PAPERS.

- Mimetic Facial Spasm; Stretching of the Facial Nerve; Recovery. By Dr. Baum. (*Berliner Klinische Wochenschrift*, October 7.)  
A Case of Periodical Hemoglobinuria. By Dr. E. R. Kobert and Dr. B. Küssner. (*Ibid.*, October 28.)  
On the Operation for Empyema. By Dr. König. (*Ibid.*)  
On Scorbutic Angina. By Dr. G. Pinder. (*Wiener Medizin. Wochenschrift*, September 28.)  
On Feigned Diseases. By Dr. P. H. Malmsten. (*Nordiskt Medicin. Arkiv*, Band x, Häft 3.)  
A Case of Acute Ascending Paralysis. By Dr. Th. Jaffé. (*Berliner Klin. Wochenschrift*, November 4.)  
A Case of Reflex Vertigo from a hitherto Undescribed Cause. By Dr. A. Erlenmeyer. (*Deutsche Medizin. Wochenschrift*, Nov. 2.)

## SURGERY.

**HOUZÉ DE L'AULNOIT AND OTHERS ON THE TREATMENT OF PURULENT COLLECTIONS BY INJECTIONS OF SALT WATER.**—*L'Union Médicale*, for October 1st, contains an account of a communication on this subject made at a recent meeting of the medical section of the French Association for the Advancement of Science, by M. Houzé de l'Aulnoit, of Lille. The difficulty which is experienced in evacuating pus accumulated in cavities is well known, more especially in the pleural cavity. These difficulties M. Houzé de l'Aulnoit met with, in a marked degree, in a case of purulent pleurisy which he had had under treatment, and in which, although the empyema had been punctured nine times and the most varied washes were employed, no result had been attained. As he was searching for an efficient antiseptic, that is to say, following the definition of M. Gubler, a body having a higher density than that of pus and acting upon the lower organisms in a destructive manner, yet quite inoffensive with regard to the human organism, he thought of a concentrated solution of chloride of sodium, the density of which is greater by one-sixth than that of pus, and which should be effectual in raising the pus and bringing it to the surface. Success justified these theoretical views. The salt injection turned out a large quantity of pus which had before resisted the washes, and the healing was complete and lasting. M. Houzé de l'Aulnoit did not rely upon this case only; he had also others—another case of pleurisy, three of deep abscesses of the abdomen, two of the iliac fossa, one with pelvic excavation, a fracture with a purulent abscess, an osteitis of the epiphysis of the tibia, etc. He would not dwell upon these facts, as they would before long be published elsewhere, in a thesis, by one of his pupils. These means, which had been so successful in purulent abscesses, had also been applied in the treatment of wounds. This application of salt was not mentioned except in the work of M. Rochard: it had been held in high esteem for hospital use in Antwerp by M. Devandré, and the practice had been eulogised by M. Latour. M. Houzé de l'Aulnoit thought that salt has a



multiple action, exercised upon the walls of the cavity, upon the red blood-corpuscles, and upon the leucocytes; it possesses also a special nutritive action. The beautiful experiments of M. Boussingault upon this point are well known; salt excites assimilation; by a sufficient proportional augmentation in the food of animals, they were seen to fatten. If the remedy was employed for the sake of its density, it was necessary to use a solution; in some cases good results had been obtained by a solution of 100 to 200 grammes to the litre. These injections caused little pain, less than those which had been made with alcohol and water.

M. Potain added a case to those already quoted; an hydatid cyst of the liver, with abundant supuration, treated by this method had terminated favourably. He thought that the employment of salt had been so much neglected because, perhaps, it was considered a housewife's remedy. M. Dupré, in analogous cases, had used salt mixed with sulphate of zinc. M. Cabello Bruller had employed sea-water with very good results. M. Rochard had been led to conclusions opposed to those of M. Cabello. His navy colleagues and himself knew that small wounds, under the influence of sea-water, were endless excoriations. With regard to sea-water being employed for injections, he could not express an opinion, not having used it for the purpose. M. Lecadre was aware of the bad effects of sea-water upon wounds, but thought that sometimes, in certain affections, it was serviceable, especially in slight conjunctivitis. M. Houzé de l'Aulnoit thought that the inconvenience caused by sea water in the treatment of wounds was due to the small quantity of sand that it contained; this was also present in the grey salt; for that reason he never employed anything but the perfectly white salt.

[In a contribution to the *Lancet*, October 12th, Dr. de Havilland Hall recommends salt water as a nasal douche in cases of ozæna, the strength being three table-spoonfuls of the salt to a pint of tepid water.—*Rep.*]

DESPRÈS ON REPEATED FRACTURE OF THE PATELLA.—The first case is reported in the *Progrès Médical* for September 21st, the patient being a woman, aged 56, who was admitted into the *Hôpital Cochin* under the care of M. Desprès. An examination of the left knee-joint, made at the hospital six hours after the woman had fallen, showed that the patella was divided into three pieces. The middle fragment was separated from the upper one by a centimètre (0·4 inch), from the lower one by three centimètres (1·2 inches), this last piece being very movable. It transpired that three years before the patient had fractured the same patella transversely, and had been an inmate of the *Hôtel-Dieu*; fibrous union of the fragments had resulted. The case was treated by means of silicated bandages, and in three months the patient was able to walk with the affected limb as well as with the sound one, without fatigue, fibrous union having taken place.

M. Desprès enunciates the following. 1. The formation of osseous callus in fractures of the patella is impossible when the articulation is distended by a large effusion, or if the pre-existing adhesions do not maintain the fragments in perfect contact in a limited effusion. This opinion, maintained by M. Guyon, finds a new proof. At the beginning of the year a patient was under observation who had sustained a fracture of the left patella. He was treated by a silicate bandage in the extended position, and osseous union was

effected. Before the accident, the man had suffered from suppuration in the peri-articular tissues, following an affection of the bone. As a consequence of this, the patella was firmly bound to the condyles by strong fibrous adhesions. In this case also, atrophy of the muscles of the thigh caused the absence of one of the principal causes of separation of the fragments. 2. The formation of fibrous callus may be considered as the definitive mode of healing of fractures of the patella; for, in the case reported, after the second fracture, as after the first, the patient could walk without fatigue and without limping, there being no difference in the movements of the two limbs. So again, the fibrous callus resisted more than the bone itself, as is evidenced by the second fracture. What use is there in endeavouring to obtain osseous callus when the fibrous is stronger than the bony? It is to be believed that the formation of an osseous callus is difficult to obtain, and is more desirable than a short solid fibrous material, the development of which depends on the treatment employed.

The second case appears in *Le Progrès Médical* for October 19. The patient was 50 years of age, and three years ago he fractured his left patella. Six months after the same accident happened to the right. Union in both fractures was by fibrous callus three centimètres (1·2 inches) long. The articulation was very loose, and walking was difficult. Eighteen months after the second breakage, the patient while in his garden tripped and fell. On being examined, it was found that the lower fragment of the right patella was broken transversely; the pieces being divided by about a finger's breadth. The fibrous callus which marked the line of ancient fracture had not stirred. An immovable apparatus was applied, and fibrous union resulted; but the patient had afterwards great difficulty in walking and also in raising his leg from the ground; going down stairs was especially laborious.

SCHOLZ AND VÖLKEL ON RECOVERY AFTER PENETRATING WOUND OF THE THORAX AND HERNIA OF THE LUNG.—The first of these cases is reported by Dr. Scholz in the *Wiener Medicinische Presse*, No. 1, 1878. The patient was a soldier who was stabbed with a knife on the left side of the chest, the wound being three centimètres (1·2 inches) long; from this protruded a piece of the lower lobe of the left lung, 19 centimètres (7½ inches) long, 5½ centimètres (2·2 inches) broad, and three centimètres thick. It was impossible to reduce the hernia. On the third day, that portion of the lung which was protruding was a reddish-brown colour, with a consistency resembling that of liver; no foetus emanated from the wound, but there was an absence of the rhythmical movements. As the hernia was acting only as a foreign body, it was decided to remove it. The edges of the thoracic wound were brought together, as far as possible, by means of a suture; a ligature was then placed round the base of the protruded portion, and its removal effected with a knife. Antiseptic precautions were taken during the operation. A considerable quantity of blood was lost at the time, but very little febrile reaction resulted from the operation. The bottom of the wound, formed by the spongy pulmonary tissue, slowly granulated. In two months and a half a cicatrix had formed, two centimètres long and five broad. This was firm to the touch, and moved synchronously with respiration. The patient was then sent back to his regiment.

The second patient was under the care of Dr.

Völkler (*Berliner Klin. Wochenschrift*, Nov. 7, 1878), having received a knife-wound below the eighth rib of the left side, in the axillary line. Directly after the accident, air freely entered the cavity of the chest through the wound; but gradually this became obstructed by a protrusion of lung-substance. In the first instance, both hæmorrhage and dyspnœa were very marked; these, however, both decreased as the hernia of the pulmonary tissues took place. When Dr. Völkler saw the patient, half an hour after the reception of the wound, there was great pallor, and a complaint of severe pain in the region of the wound; there were all the signs of a pneumo-thorax of the left side, and a prolapsed portion of the lung on the same side, which resisted every effort at reduction. The pulse was 80; respirations 40. Absolute rest was prescribed, and ice ordered to be applied to the hernia. On the third day the temperature had fallen, and the number of respirations had sunk to 27. The quantity of gas and liquid in the left pleural cavity had much diminished. As the ice was not appreciated by the patient, its use was stopped. The prolapsed portion of the lung gradually assumed a deeper colour and a firmer consistency, and exuberant granulations were developed on its surface; its volume slowly decreased, and in three weeks was about the size of a filbert. Cauterisation with nitrate of silver reduced this still more, and in six weeks the hernia was only of the size of a lentil, flat, and covered by a thin membrane. A further application of the nitrate caused this to disappear, and the patient was dismissed cured.

**HUE ON A NEW OPERATION FOR PHIMOSIS.**—Being struck by the inconvenience of the ordinary bleeding operation, M. Jude Hue (*Le Progrès Médical*) has proposed a section of the prepuce in the median line and on the dorsal surface, by means of the elastic ligature. For this purpose a needle, threaded with an elastic band, is passed between the prepuce and the gland until the bottom of the *cul-de-sac* is reached. The prepuce is then transfixed, and two ends of the elastic are knotted at the free border of the prepuce. In ten days or a fortnight the ligature comes away and the operation is complete. M. Horteloup had invited M. Hue to operate upon patients in his hospital, and the results at first were not encouraging, as a good deal of pain resulted for 24 or 48 hours. When the patients were seen three months afterwards, the results were found to be very satisfactory, so that M. Horteloup recommends this simple method in cases of phimosis without hypertrophy of the prepuce, and where there is no inflammation or thickening of the integument, and he thinks this plan will be found of great service in children.

**MACEWEN ON DERMOID CYST OF THE TESTICLE.**—Dr. Macewen reports, in the *Glasgow Medical Journal* for October, the case of a boy, aged 15, who was admitted under his care in the Glasgow Royal Infirmary, June 1877, suffering from a tumour on the right side of the scrotum. This had been noticed in the first instance shortly after birth, and had grown proportionably with the rest of the body. As a rule, no soreness was felt in the swelling, except once in every six or nine months, when it became painful, and, according to the mother's account, at these times it seemed to increase in size. An examination showed that the tumour was ovoid, smooth externally, non-adherent to the skin over it, which was of a pinkish colour. To the hand it was heavy; in some places having a semi-fluctuant feel-

ing; at other points, being quite hard. Its measurement was six inches, not quite reaching the external abdominal ring; the spermatic cord could be plainly felt between the upper extremity of the tumour and the ring. On the 18th of June the tumour was removed antiseptically by means of a longitudinal incision made from the external abdominal ring downwards for five inches. A structure, resembling tunica vaginalis, was adherent throughout to the growth and required separation. The spermatic cord was then found to run into the tumour; a ligature was accordingly placed round it to secure the spermatic vessels, and a division then effected.

The tumour was found to be composed of one large cyst and several smaller ones. The external membrane was fibrous and whitish in colour. Internally, there was a large quantity of gelatinous fluid, which, microscopically, was proved to contain granular corpuscles, and cells resembling leucocytes, but no spermatozoa. Bundles of hair were also found to exist, and in the walls of the cyst were masses of bone and cartilage, one of the pieces of the former bearing a resemblance to the foetal sphenoid, another to the superior maxilla.

The patient made a speedy recovery, and at the beginning of July was dismissed convalescent.

**DESPRÈS ON THE MECHANISM OF ORCHITIS.**—In a recent paper on the mechanism of recurrent orchitis, and inflammatory orchitis generally, M. Desprès arrives at the following conclusions. 1. Recurring orchitis and inflammatory orchitis are both due to the retention of semen in the testicle. 2. The cause of this retention is not always situated at the same point, but it is more than probable that swelling of the mucous membrane of the ejaculatory ducts and vas deferens, or of the lining membrane of these canals at the periphery in the prostate, or of the mucous membrane of the urethra, is the ordinary cause of retention of the semen. 3. The rarity of suppuration in cases of orchitis allows these inflammations to be designated seminal engorgement of the testicle, in the same way that the retention of milk in the mamma has been called lacteal engorgement. 4. The appearance of orchitis on from the tenth to the twentieth day of gonorrhœa, is in accordance with the functional activity of the testis; those patients with an actively exercised organ should develop orchitis towards the end of the urethritis. 5. The orchitis occurring during convalescence from gonorrhœa is not produced by the same mechanism as those following an injury. 6. Orchitis due to a wound, or to some urethral irritation, can be explained by swelling of the affected parts, particularly on a level with the ejaculatory ducts and vesiculæ seminales, which rapidly prevents the flow of semen into its reservoir, the vesiculæ seminales.

**ASCITES COMPLICATED WITH STRANGULATED UMBILICAL HERNIA.**—The patient was a man, 55 years of age, who was under the care of M. Peter for six months, suffering from cirrhosis of the liver with ascites. For this, he was tapped for the first time on April 25. An umbilical hernia, which had existed for many years previously, showed signs of strangulation at the time of the operation; but reduction was effected. A second puncture was made on May 1st, and was accompanied by the same accident. This time, however, reduction of the gut could not be obtained, and on May 3rd the patient was transferred to M. Verneuil's wards. Owing to



the feeble constitutional condition of the man, M. Verneuil refused to operate with the knife. As some leeches, which two days before had been applied to the hernia, had given rise to some hæmorrhage, an application of Vienna paste was made at the time the patient entered. The slough separated May 5th, and this was followed almost immediately by an escape of a considerable quantity of faecal matter from the upper part of the wound. The vomiting then ceased, and the patient rapidly gained strength. On May 23rd there was no stool, the vomiting then reappeared. A purgative produced no effect. The next day, a sound introduced into the superior opening of the intestine gave vent to a large quantity of semi-liquid material. The vomiting then stopped, only, however, to recommence on the 25th; the ejected matter was black, like coffee-grounds. The escape of fæces from the upper opening took place regularly, but the temperature fell gradually, and the patient succumbed on May 27th. At the *post mortem* examination, the liver was found to be somewhat contracted. Hæmorrhagic pleurisy was present on the left side. The strangulation was situated in the small intestine, one metre above the cæcum; there was no trace of the epiploon. The adhesions which united the intestines to the umbilical opening were perfectly firm; the artificial anus had undoubtedly prolonged life, death being due to the other lesions.

**POOLEY ON OPERATION IN SPERMATORRHEA.**—In the *New York Medical Journal* for September 1878, is reported the case of a patient, aged 27, who was operated upon in St. John's Riverside Hospital, by Dr. Pooley, for spermatorrhœa. The man had suffered from this malady for several years, involuntary seminal emissions taking place almost every night, and sometimes more than once. The urethra was so sensitive that the mere act of micturition caused a loss of semen. Plain and medicated bougies, the porte-caustique, and every kind of drug, had been tried in vain. On February 17th, cystotomy was performed, the incision being made at the apex of the prostate gland. A silver tube was introduced through the wound into the bladder; to this was connected a long piece of India-rubber tubing, by which the urine was carried to a vessel underneath the bed. On the 20th there were a rigor and slight hæmorrhage through the tube, necessitating its withdrawal. On March 11th, two emissions occurred, one with an erection of the penis, the other without. On April 1st, he was discharged, no more losses of semen having taken place, and the health being improved in every way. The patient was kept under observation and remained free from his malady. Some time afterwards he married, and performed his conjugal duties in a satisfactory manner. Dr. Pooley remarks that, in such a case, any operative procedure which strongly impresses the mind, is apt to procure a temporary amendment from the moral effect, and that marriage in this case completed the cure.

**POOLEY ON RUPTURE OF THE RECTUM.**—In the *New York Medical Journal* for September, Dr. Pooley records a case, where a large amount of earth had fallen on the abdomen of a man. On his admission into the hospital an hour after the accident, it was found that he had a compound comminuted fracture of the left femur. Besides this, there was a great desire to defecate; every few minutes the patient made fruitless efforts to empty his bowels, but to no purpose. He died within twenty-four hours.

The *post mortem* examination showed that the abdominal cavity was half filled with blood. About the middle of the rectum there was a large transverse rent, nearly tearing the bowel across. The mesentery was also torn about the middle of the small intestine. Dr. Pooley would, in a similar case, regard as diagnostic of rupture of the rectum, a constant but unavailing effort to defecate.

T. F. CHAVASSE, M.D.

**VOLTOLINI ON A NEW AND SIMPLE METHOD OF OPERATING FOR LARYNGEAL POLYPUS.**—This method (described in the *Monatschrift für Ohrenheilkunde*, Nov. 3, 1878) consists in passing an ordinary sponge, attached to a somewhat flexible wire, into the larynx and drawing it to and fro. The sponge may be used dry, or previously moistened with water. The moment the sponge enters the larynx, the latter closes spasmodically. The sponge is then held there till the larynx dilates for an inspiration, at which moment the sponge is to be pushed on through the glottis and drawn upwards and downwards. When the polypus is situate above the vocal cords there is no necessity to wait, but the sponge is twisted round as soon as it has entered the larynx. In cases in which the epiglottis can be seen by drawing the tongue forwards and depressing it with a spatula, the laryngeal mirror may be dispensed with in introducing the sponge, for on applying the sponge to the posterior surface of the epiglottis it easily slips into the larynx. This method, at first recommended only for soft polypi, is, according to the author, also of service in the harder forms. In these cases the wiping out of the larynx is repeated after several days (from four to eight) till the polypus becomes livid, mortifies, and falls off.

In a later number of the same journal (November 8th, 1878), Professor Voltolini gives an account of a case operated on by this method by Dr. Ariza, of Madrid, and described by him in *El Anfiteatro anatomico espanol y el Pabellon medico*, May 31st, 1878. This case was one of a woman, aged 28, with a dark red polypus of the size of a pea, attached to the free border of the left vocal chord near its anterior part, and hanging down into the trachea. After having in vain tried to remove it with various instruments, and also having employed local anæsthesia without sufficiently overcoming the irritability of the larynx, Dr. Ariza had recourse to Voltolini's method. The sponge was applied for several successive days and produced some bleeding from the polypus. As the growth, however, did not diminish much in size, Dr. Ariza endeavoured again to seize the polypus with a snare, and succeeded in tearing off a portion of it. After three or four more sittings, in which the sponge was used, the growth diminished rapidly in size, finally became violet or black coloured, and on the following day had disappeared entirely. Dr. Ariza considers that this operation is not in the least degree dangerous to the patient, that it can be performed by any surgeon who is not a specialist, and that it is the only operation which can be employed in those frequently occurring cases in which there is absolute intolerance of the larynx. Professor Voltolini thinks that in the above case the operation might have been completed without the use of the snare, and cautions against endeavouring to tear off hard polypi by the sponge method. As above mentioned, it suffices in these cases to bruise and lacerate the polypus in order that it may mortify and fall off.

E. CRESSWELL BABER, M.B.

SMITH ON UNUNITED FRACTURE OF PATELLA.—In this case, reported in the *Lancet*, August 1878, p. 144, Mr. Henry Smith, a year after the accident, fully exposed the fractured bone, under Listerism, dissected away all adhesion of the fragments to the condyles, removed a thin section from their opposing surfaces, and, drilling two holes, attempted to bring them together by silver wires. As he was frustrated, however, by the contractions of the quadriceps extensor, this muscle was divided subcutaneously, three inches above the joint, and then apposition of the fragments was readily secured. In eight weeks the cure was perfect; the patella was freely movable over the condyles; the leg capable of flexion to an angle of 45 degrees; the patient walking without aid, and with only a slight limp. At the time when Mr. Smith performed the operation he was under the impression that, with the exception of Mr. Lister's case, the method of procedure was novel; however, in the *Lancet*, p. 202, he draws attention to the fact that Professor Cooper of San Francisco, in 1861 (*Medical Times and Gazette*, vol. ii, 1861, p. 467), spoke most highly of the operation, stating that he had performed it, in recent fractures of the patella, in many cases with unvarying success; one special element of his success being due, he believed, to the fact that he always prevented union by first intention, by stuffing the incision with charpie, and securing a granulating sore.

SOUTHEY ON PARACENTESIS ABDOMINIS BY GRADUAL DRAINAGE WITH A SINGLE FINE CANNULA.—Dr. Reginald Southey, who last year suggested the use of a fine silver cannula to drain œdematous limbs, has now adopted the same plan of treatment in cases of ascites, and with excellent results. In the *Lancet*, August 1878, p. 176, a case is reported in which, during twenty-one hours, 11,400 cubic centimètres of clear fluid were evacuated by a fine capillary tube, inserted in the mesial line, midway between the umbilicus and pubes. In treatment, this mode of performing paracentesis leaves nothing to be desired; the *tuto, cito, et jucundè* are sufficiently fulfilled by it.

WILL ON CATGUT DRAINAGE AND SUTURES.—In the *Medical Times and Gazette*, August 1878, p. 247, Dr. J. C. Ogilvie Will enters fully into the uses and mode of preparing catgut, when used instead of drainage-tubes or for ligatures. In September 1876, Mr. Chiene first suggested the use of catgut instead of India-rubber or other drainage-tubes, having seen how catgut sutures were absorbed after three or four days. In the *Lancet*, May 1876, p. 771, Dr. Fleming showed by experiments that catgut, introduced into the living tissues, became organised, and incorporated with the tissues themselves. In Dr. Will's case, one of Syme's amputation, the projecting ends of the drain fell off on the seventh day, and on the tenth day the sinus was healed. The great advantage the catgut holds over horsehair, or other means of drainage, is that the dressing does not need to be changed from time to time in order to look after the drain, and it is only by the use of such an absorbable drain that the true antiseptic system can be carried out by the great mass of practitioners; for, if we do not remove the deep dressings from first to last, we save gauze and avoid the necessity for the spray, which is not called for during the removal of external dressings, if the outer layer of the deep dressing be well damped by an antiseptic solution.

SMITH ON A CASE OF WOUND OF THE MIDDLE CEREBRAL ARTERY FROM A STAB THROUGH THE SKULL.—Mr. G. Smith reports, in the *Medical Times and Gazette*, September 1878, p. 378, a case that occurred under the care of Mr. Dowson, at the Bristol Infirmary, in which a Norwegian sailor, aged 25, was admitted with injuries inflicted by an ordinary clasp-knife during a drunken brawl, and died twenty-one hours after the injury. On admission, blood issued freely, in jets, from an incised scalp-wound one-inch in length, above the left ear, which communicated with a slit in the temporal bone. At the *post mortem* examination, the knife-cut was seen to pass at right angles to the squamous portion of the temporal bone, through the middle lobe of the cerebrum. It entered about the middle of the second temporo-sphenoidal convolution; went through the middle lobe; passed across the anterior perforated space; re-entered the brain-substance in the left crus cerebri, which it pierced to the depth of a quarter-of-an-inch, and terminated in the middle line of the brain, about an eighth-of-an-inch below the third ventricle, cutting in its course the left middle cerebral artery half through, about an inch from its origin, and just before giving off the anterior choroid. The unique point about the case is, the wounding of the middle cerebral artery. But for this fatal accident, the patient might have recovered, as there was very little disturbance of the brain-tissue.

WESTMORELAND ON SUBCORACOID DISLOCATION OF THE HUMERUS CAUSED BY SNEEZING.—Mr. J. Westmoreland, in the *Lancet*, August 1878, p. 202, adds another to the list of injuries occasionally produced by sneezing. A publican, resting his left arm, during lateral extension, loosely on some spirit barrels, took a pinch of snuff from a friend, and sneezed violently, when his left shoulder slipped out of place.

[Several cases of fracture of the ribs, and one case of dislocation of the crystalline lens from sneezing, have been reported in the journals (vide *Medical Digest*, section 598; 3).—*Rep.*]

RICHARD NEALE, M.D.

HARVEY ON RAPID DILATATION OF THE FEMALE URETHRA FOR THE RELIEF OF VESICAL IRRITABILITY.—In the *New York Medical Record*, May 1878, Dr. P. F. Harvey describes the following case. Mrs. L., a married laundress, aged 31, had an attack of acute cystitis after an abortion in the third month, characterised by alarming prostration, intense burning pain on micturition, and the passage of bloody and muco-purulent urine. The acute symptoms having subsided, the usual means of relief were tried in vain to control the chronic irritability that remained. Every hour during the night a spirt of urine, amounting to a teaspoonful, would constitute her most serious trouble. Nausea and vomiting were frequent symptoms. Obstinate constipation had existed for months. Again, there would be retention, with great tenesmus and suffering until the pent-up urine was voided through the catheter. The passage of a soft India-rubber catheter always gave severe pain. Dr. Harvey determined to resort to rapid dilatation of the urethra as the only hope of giving relief. Having emptied the bladder and put the patient under ether, he introduced into the urethra the blades of a narrow sequester-forceps, and gently dilated until he could introduce his little finger. The dilatation was increased to an extent admitting the introduction of his thumb or forefinger.



Urine ran freely from the bladder during the dilatation, notwithstanding its previous evacuation. The vesical mucous membrane felt soft, velvety, and free from disease: hæmorrhage was slight. During the five days succeeding the operation, all her previous symptoms were aggravated. Twenty-six days afterwards Dr. Harvey dilated again to the extent advised by Teale, stretching the urethra and vesical neck with the indices of both hands to their utmost capacity consistent with safety. Immediate relief was obtained. The patient gradually recovered.

FANCOURT BARNES, M.D.

**D'AMBROSIO ON SARCOMA OF THE MALE BREAST.**—Dr. D'Ambrosio relates the following case in the *Annali Clinici dell' Ospedale degli Incurabili*, 1878 (*La Medicina Contemporanea*, August 1878). In 1873, a man aged 30 came under his care. In the centre of his left breast, in the situation of the nipple, was a fungoid tumour, apparently divided into two lobes by a narrow fossa; it was entirely destitute of skin, which formed a somewhat raised and hard ring at its base. The base of the tumour was rather wide; but it appeared to be quite movable on the subjacent tissues and free from all attachment to the ribs. It was 7 centimètres (2·8 inches) in height, its greatest circumference was 12 centimètres (4·8 inches), and that of the base 6 centimètres. Its surface was studded with large granules; and to the touch, it had a firm elastic consistence. The patient was constantly troubled with lancinating pains; the glands had not undergone the least change; his general appearance was healthy. The growth had commenced eight months previously without known cause; there was no hereditary predisposition. The tumour was removed, and the patient was soon afterwards discharged cured. It was diagnosed to be a spindle-celled sarcoma; and this was confirmed by microscopic examination.

**FLEURY ON THE FRACTURE OF A CATHETER IN THE BLADDER: REMOVAL PER RECTUM.**—In the *Bulletin et Mémoires de la Société de Chirurgie*, Nov. 5, 1878, M. Fleury describes the case of a man on whom lithotripsy was performed by Civiale in 1863, and who had since been accustomed to wash out the bladder by means of a metallic catheter. On April 23, 1878, he found on withdrawing the catheter that a portion was broken off and remained in the urethra; he pushed it into the bladder by means of another catheter. When he was seen by Dr. Brun four hours afterwards, he was found to have in his bladder a piece of catheter 7 centimètres (2·8 inches) long, lying with one end at the upper part of the bladder and the other at the *bas fond*. Dr. Fleury, on being called in consultation, advised that no attempt at extraction should be made, either through the urethra or by cystotomy. (The patient was 78 years of age.) The inflammation produced by the foreign body was moderate, and catheterism was continued without much difficulty. Four days later, during defecation, the end of the catheter was found to present at the anus, and was removed by moderate traction. After this, there was no pain; but the urine continued to escape *per anum*.

**GAUJOT ON A CYSTINE CALCULUS.**—M. Gaujot describes a case of cystine calculus in the *Bulletin et Mémoires de la Société de Chirurgie*, Nov. 3, 1878. The patient was a man aged 25, who was admitted into the Val-de-Grâce on May 30th, 1877. The first symptoms of stone appeared in 1876. The

calculus was removed by the prerectal incision, and the patient recovered in five weeks. The stone weighed 25 grammes (387 grains); it was ovoid in shape, of yellow colour, and had a rugose surface. Its greatest diameter was 44 centimètres (about 1½ inches). On section, it presented a homogeneous structure, without nucleus or strata; it was greasy to the touch, and friable. Analysis showed it to be composed of cystine, with traces of phosphate and sulphate of lime, mucus, and fatty matter.

A. HENRY, M.D.

**LAWRIE ON NERVE-STRETCHING IN ANÆSTHETIC LEPROSY.**—Dr. E. Lawrie, of the Bengal Medical Service, reports in the *Indian Medical Gazette* for September, the case of a man aged 40, who was admitted into the Medical College Hospital at Calcutta, on July 1st, with anæsthetic leprosy. On admission, there was complete loss of sensation all over the patch; the patient could only grasp feebly with the right hand; and the ulnar nerve was very much thickened from below the inner condyle of the humerus to about half-way up the arm. The nerve was stretched the same day under chloroform.

No regular notes of the case were taken afterwards. The patient attended very irregularly, and would never admit that his condition was improved, though the affected skin became visibly healthier. After a long interval he presented himself on August 5th, and it is recorded that "the skin of the hand and forearm is uniformly healthy; sensation is perfect throughout the area that had been anæsthetic; and the thickening of the ulnar nerve has entirely disappeared. The patient admits that the tingling and pain no longer trouble him, and that his hand is much stronger."

Dr. Lawrie has stretched the ulnar nerve in about thirty cases of anæsthetic leprosy. In every case the operation was followed by benefit, as far as the area supplied by this particular nerve was concerned, which appeared likely to be permanent. The patients ceased attending the dispensary whenever the relief they experienced seemed to them decisive, and therefore no notes of their final condition were obtainable, except in the present instance.

**DAVIS ON REDUCING PROLAPSUS OF THE RECTUM.**—In *The Hospital Gazette*, July 11th, 1878, Dr. J. C. Davis gives the following directions for reducing prolapsus of the rectum. If the patient be a child, place it on its back, flex the thighs and legs at a right angle to the body; let the nurse or an assistant hold them in this position; wipe the mucus or other discharge from the prolapsed part; then take an old handkerchief, a piece of soft linen, or cotton rag, place it loosely over the index finger and introduce it slowly into the rectum; the mucous membrane will adhere to the rag, and the part last descending will be the first to repass the sphincter. Carry the finger the full length of the rectum; then with two fingers of the left hand (one on each side) sustain the gut while withdrawing the finger. To remove the rag, keep up the counter-pressure with the fingers of the left hand, and pull gently, first on one side, then on the other of the handkerchief or rag, and in this way remove it from the rectum. If the patient be other than a child, place him in the "Sims position", and the same procedure will accomplish the object in view.

The subsequent treatment, surgical or otherwise, will depend on the causes which have produced the disorder.

Dr. Davis says that this method] has proved eminently successful in his hands for more than a score of years. Its advantages are simplicity, facility, and rationality; there is no squeezing or brushing of the parts, hence little or no pain, unless the gut be inflamed.

### RECENT PAPERS.

- Recovery from Traumatic Tetanus under the Influence of Chloral-Hydrate and Bromide of Potassium. By Dr. Panthel. (*Berliner Klin. Wochenschrift*, October 28.)
- Cancerous Tumour on Posterior Wall of the Prolapsed Rectum; Excitation by the Ecraseur; Death. (*Wiener Medizin. Wochenschrift*, October 5.)
- A Case of Incarcerated Obturator Hernia successfully operated on. By Dr. A. Zsigmondy. (*Ibid.*)
- The Induration of Chancres as characteristic of the Initial Form of Syphilis. By Dr. J. Grunfeld. (*Allgemeine Wiener Med. Zeitung*, October 15.)
- Fungous Excrescences of the Female Urethra. By Dr. Wahl. (*Ärztliches Intelligenz-Blatt*, October 8.)
- Traumatic Tetanus Treated Successfully by Nerve-stretching. By Dr. Klamroth. (*Deutsche Medizin. Wochenschrift*, Nov. 2.)

## MATERIA MEDICA AND THERAPEUTICS.

HALL ON CHLORAL-HYDRATE GIVEN HYPODERMICALLY IN MALIGNANT CHOLERA.—Mr. Augustus R. Hall brings forward another case in the *British Medical Journal*, September 1878, p. 435, to confirm the value he asserted this agent to possess, four years ago. A woman thirty years of age was admitted into the Gwalior Hospital in a state of well-marked collapse. No pulse could be felt either in the radial or the brachial artery, although she was very thin. The temperature in the axilla was 95.2° Fahr. The usual area of cardiac dulness was resonant. The heart's pulsations were scarcely audible. Chloral by the mouth being rejected, six grains dissolved in a drachm of water were injected deep into the substance of the deltoid. In half-an-hour the dose was repeated; and after eighteen grains of chloral had been thus injected, the temperature rose to 97.8°. Three hours after the first injection she passed a small quantity of urine. Within eight hours she had thirty-two grains of chloral injected; and, to quench the violent thirst, water acidulated with sulphuric acid was given. The motions now became tinged with bile; pulse 82, temperature 98.2.

The case shows that a very considerable quantity of a vascular depressant, so powerful as chloral, can be introduced during the cold stage of cholera with advantage.

Mr. Hall explains the resonance existing over the area of cardiac dulness and the almost total absence of heart sounds, as follows. As the cold stage advances, the cardiac spasm becomes so strong as to diminish the heart's size and prevent diastole, and then the lung-tissue occupies the cardiac space. If this be the true explanation, it affords a strong argument against the use of stimulants of all kinds, agents that find no advocate in Mr. Hall, whose treatment of cholera is as follows: Dilute sulphuric acid, in premonitory diarrhoea, in cold, not iced, water; in collapse, chloral hypodermically, the lower the temperature the larger the doses; in reaction, milk and soups, no stimulants, which are equally injurious as opium; in secondary fever, quinine is the sheet anchor, and this plan he urgently impresses upon all, requesting that a report of the results may be published.

[It was in the early part of 1873 that Mr. Hall first drew the attention of the profession to the value of chloral-hydrate injected subcutaneously in cholera collapse; and in October 1873, Dr. Beatson, late surgeon-general, issued a circular to all the medical officers in the Bengal command, suggesting that a careful trial should be made of Mr. Hall's plan of treatment. Messrs. Scott and Ruxton submitted independent reports of the result of the use of chloral-hydrate at Lucknow during an epidemic in October and November 1873. Their evidence was to the effect that the agent was virtually powerless (*vide Lancet*, January 1875, p. 36). In reply, Mr. Hall asserted (p. 631), that instead of ten-grain doses of chloral frequently, one three-grain dose was injected, and, that in nine cases brandy was also administered as well as quinine and opium, so that really Messrs. Scott and Ruxton's report was valueless as testing the powers of chloral in cholera collapse. Mr. Edwin Fairland, in the *British Medical Journal*, January 29, 1877, p. 102, reports a case of malignant cholera that recovered under chloral treatment combined with nitrite of amyl inhalations. Dr. W. G. Hunter (*Lancet*, March 1877, p. 435) treated thirty-two cases strictly in accordance with Mr. Hall's suggestions, but the results were so disastrous that the treatment was abandoned. Dr. Wood in 1877 (*Lancet*, March 1878, p. 406) again carried out Mr. Hall's suggestions with a mortality of 60 per cent; twelve patients dying out of twenty thus treated. Mr. Hall's paper, as read before the Royal Medical and Chirurgical Society, is published in the *Practitioner* for July 1875, p. 5, and also in *Braithwaite's Retrospect*, vol. lxxii, p. 27.—*Rep.*]

STEWART ON CHLORIDE OF AMMONIUM IN HEPATIC DISEASES.—Dr. William Stewart adduces fresh instances of the vast value of this agent in diseases of the liver, in the *British Medical Journal*, September 1878, p. 467. It was in the year 1870 that Dr. Stewart first drew attention to the use of chloride of ammonium in diseases of the liver, as met with in the tropics; and subsequent papers have explained the general and special action of the drug on the congested or inflamed liver.

The following remarkable train of effects follows the ingestion of a twenty-grain dose, the only contra-indication for its use being a dry and hot skin; under which circumstances some simple diaphoretic ought to precede its administration. As a general rule, about fifteen minutes after taking the medicine, the patient experiences a sensation of warmth in the epigastrium, which by-and-by extends, pervading the abdomen, and gradually becomes diffused over the entire cutaneous surface. The nervous system becomes exhilarated, the circulation excited, the patient feeling light-headed or possibly drowsy. Acute pain, previously felt in the hepatic region, is either entirely removed, or, in its place, pain is referred to the axillary region, where it was not previously complained of; the patient now often falls asleep, and shortly a full and free perspiration breaks out, lasting one or two hours. Again the pain returns to its original position, but mitigated; and with the next dose of medicine, at the expiration of six or eight hours, similar phenomena result. After several doses the urine becomes very abundant, the appetite is much improved, and the hepatic mischief vanishes. Sometimes after taking the chloride (in five minutes to half an hour) a peculiar sensation may be felt in the hepatic region, variously described by patients as a "shock", "pulling", "pins and needles", a



"clawing", "working", or "gnawing sensation", none of which are to be interpreted as the medicine disagreeing, but the contrary. Dr. Stewart congratulates the profession that the brilliant results following the use of chloride of ammonium, both in this country and abroad, are becoming more generally recognised. Dr. Murchison, in the second edition of his work upon *Diseases of the Liver*, 1877, p. 624, thus speaks of the drug: "The chloride of ammonium holds a pre-eminent place" among remedies for functional disorders of the liver, "being of great service in the functional derangement of the liver attended by lithæmia".

**PRIDEAUX ON SALICYLIC ACID AS AN ANTI-SEPTIC AND AN ANTIPYRETIC.**—Mr. Engledue Prideaux makes, in the *Practitioner* for September, p. 177, some interesting remarks on salicylic acid, considering it the most valuable addition to our pharmacopœia during the last few years. Up to the present time the antiseptic treatment, applied to zymotic diseases, has failed, more or less, owing to the impossibility of finding a drug that could be given in sufficient doses with safety. In salicylic acid we have an agent of which large doses may be given with impunity, half an ounce having been administered in twelve hours without any ill results. That salicylic acid is a germicide many experiments prove. Urine, with  $\frac{1}{2}$  grain *per mille* of the acid, remains clear for fourteen days. Bacteria are present in small numbers after three days, but their activity is not great. With one grain of the acid they are fewer in number, and with one grain and a half they cease to exist, and the urine remains clear and sweet for any length of time. The urine of patients taking either the acid or its salts remains free from all power of decomposition. Three or four grains of the acid, added to 1,000 parts of putrid urine kills all bacteria, but does not destroy its odour. Milk requires three grains per thousand to sterilise it. When the pure acid is administered part of it passes off by the urine, and is eliminated as salicylic acid; part passes unchanged in the fæces. It may be detected in the urine in ten minutes after being swallowed, and in less than that time in the blood.

In 1876 Mr. Prideaux treated with salicylic acid or its salts eighty-eight cases of confluent small-pox, in the Derby hospital, without losing a case. Since then, seventy-eight cases of scarlet fever, with only one death, and that a case seen at the height of the disease. Many cases of measles, and some few attacks of typhoid fever, yielded equally satisfactorily to the same treatment. The temperature invariably falls rapidly after its administration, and is easily kept down by repeated doses; so that, even if the drug do not exert a germicidal action, by keeping the temperature down, it prevents the excessive tissue-waste and loss of power attending pyrexia. Its value in acute rheumatism is too well established to need comment here. Although a perfectly safe drug, still, in some cases, unpleasant results follow frequent and large doses, a result that may be avoided, Mr. Prideaux finds, by giving salicylate of ammonia.

[As regards the value of salicylic acid in scarlatina, Dr. Brakenridge, in the *Medical Times and Gazette*, December 1876, p. 620, gives a summary of nine cases where he employed it in this disease, with results far less favourable than those obtained in numerous cases treated by sulpho-carbolate of soda. —*Rep.*]

**BUZZARD ON HYPODERMIC INJECTION OF MERCURIALISED PEPTONE.**—Dr. Buzzard (*British Medical Journal*, Sept. 28, 1878, p. 475) has employed a peptone solution of mercury, as prepared by Messrs. Darby and Godson, of Leadenhall Street, on three patients, giving in the aggregate two hundred injections of five to fifteen minims. In only one instance was the specific effect of the mercury made evident, and then only as regards the intestinal mucous membrane; in none was there any appearance of salivation. A case of double optic neuritis recovered under treatment; the others, who suffered severely from old-standing hemiplegia and paraplegia, gave no evidence of having been favourably influenced by the drug. Dr. Buzzard thinks that, with ordinary care, abscesses may be avoided, and that the mercury is absorbed. The injection causes, however, great pain, and he is disposed to think that it possesses no advantage over inunction except cleanliness. Mr. G. H. Bishop, in the same journal for October 26 (p. 627), relates a case at the Lock Hospital which was treated by the hypodermic injection of mercurialised peptone. He says that there are cases which may derive benefit from this treatment; but it has the disadvantage of leaving hard painful nodules at the seat of injection.

RICHARD NEALE, M.D.

**NEUMANN ON BORACIC ACID IN SKIN-DISEASES.**—Neumann (*Pester Mediz.-Chirurg. Presse*, 1877) recommends boracic acid in solution as antiparasitic in pityriasis versicolor and tinea tonsurans; in ointment for eczema, and in alcoholic solution for pruritus cutaneus and urticaria.

**DUNCAN ON THE MODES OF ADMINISTERING MERCURY IN SYPHILIS.**—Dr. John Duncan (*Edin. Med. Journal*, August 1878) made a comparative trial of subcutaneous injection, fumigation, inunction, and administration by the mouth, in the treatment by mercurials of the syphilitic patients in the Lock hospital in the Edinburgh Royal Infirmary. He has found that inunction and subcutaneous injection do not hold out sufficient inducement to employ them, otherwise than as exceptional measures in cases of peculiar weakness or individual idiosyncrasy. He points out that the effects of fumigation depend greatly on inhalation of the vapour; one patient who, contrary to orders, kept her head under the blanket for several minutes, suffered in consequence from a very severe attack of bronchitis. In administering by the mouth, the advocacy of particular preparations is not warranted by any special advantages which are possessed by one as compared with another. Small doses frequently repeated are better borne and more effectual than larger doses administered at longer intervals.

GEORGE THIN, M.D.

**BERT ON PROTOXIDE OF NITROGEN AS AN ANÆSTHETIC.**—M. Paul Bert communicated to the Société de Biologie de Paris, at the sitting of July 13, his experiments in relation to the anæsthetic properties of the protoxide of nitrogen. M. Bert has been enabled, by means of this gas properly administered, to keep dogs in a complete state of insensibility, accompanied with absolute muscular relaxation, for half an hour. Sensibility and intelligence, as measured by voluntary biting, returned after two or three respirations when the inhaling apparatus was removed. During this complete anæsthesia the respiration continued with perfect calmness, the pulse beat normally, the temperature remained un-

changed. A manometer in connection with an artery showed no sensible alteration of pressure. Every stimulus to a sensory nerve, even simply touching the eye, increased by several centimètres the cardiac pressure; and finally irritation of the peripheral end of the pneumogastric stopped the heart, whilst irritation of the proximal extremity suspended the respiration. In short, all the reflex movements of the sympathetic system, which were investigated, were found preserved. M. Bert concludes, therefore, that protoxide of nitrogen affords a guarantee of safety such as is absolutely wanting in other anæsthetics, which affect at once, and almost simultaneously, the nervous system of the life of relation and that of organic life.

**RABUTEAU ON THE ANÆSTHETIC PROPERTIES AND MODE OF ELIMINATION OF IODIDE OF ETHYL.**—M. Rabuteau, in a note read before the Société de Biologie (*Gazette Médicale de Paris*, October 12, 1878), discusses the anæsthetic properties and mode of elimination of iodide of ethyl. This, the ordinary hydriodic ether, is a colourless liquid of a pleasant ethereal smell, with a piquant taste, which, however, is not caustic, as in the case of chloroform; its density is 1.946. It is readily soluble in alcohol, and in ether, but only very slightly so in water. Mingled with water it falls to the bottom, dissolving so far as to impart its taste and smell to the mixture. It volatilises readily at the ordinary temperature, producing cold. It boils at 72.2 C. (161.96° Fahr.), but is not inflammable. Iodide of ethyl is rapidly altered by light, becoming brown from liberation of iodine, but it may be again made colourless by shaking it with water which has been rendered feebly alkaline, and afterwards washing with pure water. It is slowly decomposed by the alkalies, and by the oxide and salts of silver. Iodide of ethyl is therefore an unstable ether. The body is formed by the action of hydriodic acid upon ethyl-alcohol, iodide of ethyl and water being formed. Experiments with fowls, frogs, and plants show that iodide of ethyl is an anæsthetic which acts more slowly than bromide of ethyl and chloroform, that its effects are more persistent, that it is broken up in the organism into an iodide which is probably the iodide of sodium, that it is found in the saliva and urine, and that, like bromide of ethyl, chloroform, and ordinary ether, it prevents germination.

D'ARCY POWER.

**VON ZIEMSEN ON SUBCUTANEOUS INJECTION OF SCLEROTINIC ACID IN HÆMOPHTYSIS.**—Dr. von Ziemssen, of Munich (*Allgem. Wiener Medizin. Zeitung*, October 29) uses in hæmoptysis subcutaneous injections of a solution of four parts of sclerotic acid in 100 of distilled water. A Pravaz's syringe is injected twice or three times in twenty-four hours. The effect is said to be more certain than that of ergotin, and no pustules are produced.

**GATTI ON OXALATE OF SODA IN METRITIS.**—Dr. Gatti (*Rivista Clinica di Bologna*, Nov. 3, 1878) alleges that he has obtained excellent results from the employment of oxalate of soda in metritis and puerperal metro-peritonitis. He gives it in daily doses of 89 centigrammes (12½ grains) in 125 grammes of mucilage. Lange has already spoken favourably of this remedy, not only in metritis but also in puerperal infection. Gaspari, on the other hand, denies that it possesses any antiseptic property.

A. HENRY, M.D.

**VIGIER ON THE ALCOHOLIC SOLUTION OF DROSERA.**—M. Vigier, at a meeting of the Société de Thérapeutique, June 12 (*Gazette Hebdomadaire*), drew attention to the alcoholic solution of drosera, and to the difference between it and the tincture, remarking that many physicians use them indiscriminately. M. Constantin Paul insisted upon this difference, and said that generally the alcoholic solution is thought to be stronger than the tincture, but this is not the case; the tincture is prepared from the dry plant, and is at least 50 per cent. stronger than the alcoholic solution. It is the same with aconite as with drosera; ten grammes of dry aconite would give a tincture containing 2½ grammes of the extract, but it would require 100 grammes of the alcoholic solution to yield the same quantity of extract. M. Byasson would prefer in general to use the tincture. It is important to know when and where the plant was gathered, as the quantity of water contained in the plant is variable.

**FÜRBRINGER ON THE MEDICINAL TREATMENT OF DIABETES MELLITUS.**—In the *Deutsches Archiv für Klinische Med.*, Band xxi, Hefts 5 and 6, Dr. P. Fürbringer publishes observations on the influence of salicylate of soda, phenol, benzoate of soda, thymol, quinine, digitalis, arsenic acid, bromide of potassium, oil of turpentine, and pilocarpin, on the absolute and relative amount of sugar in the urine.

Inasmuch as the secretion of nitrogen, as well as of sugar, in diabetic patients—at least in severe forms, where, with complete exclusion of carbonhydrate, sugar is still produced in large quantities—arises from a specific decomposition of albumen, Dr. Fürbringer tries to estimate the pathological importance of each form of diabetes by the relative amount of sugar (the weight of the sugar being divided by that of the nitrogen excreted), and from the variations, to arrive at a standard by which to judge of the effect of therapeutical agents. From his observations, he deduces that the greater the relative amount of sugar the more favourable is the prognosis; that a remedy which increases the glycosuria does the less harm, as it increases the relative amount of sugar; and lastly, that a remedy which does not alter the glycosuria is useful as it increases the relative amount of sugar. In the first two cases the increase is due to a diminished excretion of nitrogen; and the drugs which did good by this means were salicylate of soda (8 to 10 grammes = 120 to 150 grains a day) and carboic acid pills three times a day; quinine, arsenic acid, pilocarpin, and benzoate of soda gave no definite result; thymol, oil of turpentine, digitalis, and bromide of potassium did harm, and are therefore contraindicated in diabetes.

**DUJARDIN-BEAUMETZ ON PELLETIÉRINE.**—M. Dujardin-Beaumetz, at the meeting of the Société de Thérapeutique on June 26th (*Gazette Hebdomadaire*) read a paper on the action of "pelletierine" when used as an anthelmintic. He showed a tænia which had been expelled after the use of this new alkaloid, which was discovered by Tauret (of Troyes). The dose administered was 57 centigrammes (eight grains) of "pelletierine" in 300 grammes of water. In about a quarter of an hour headache and faintness were experienced by the patient; after two hours he took a dose of castor oil, and in the course of the day an entire tænia was passed. Similar results have been obtained by M. Mollé (of Troyes) and Garnier (of Mans); but MM. Laboulbène and



G. Paul did not find it so satisfactory; they, however, only gave from 25 to 30 centigrammes. There is no doubt that it is a powerful anthelmintic; it should be used along with the compound tincture of jalap and the syrup of senna.

**FRÄNKEL ON THE MURIATE OF PILOCARPINE.**—Herr A. Fränkel communicates (*Charité Annalen*, Band iii, 1878) the results of his experiments on dogs, made for the purpose of ascertaining the physiological and therapeutical action of the muriate of pilocarpine. Injection into the jugular vein of small doses (4 centigrammes = 0.6 grain) gave insignificant results. In increasing the dose, there resulted a considerable diminution in the frequency of the pulse, persisting after division of both vagi, disappearing after the injection of morphia, and not recurring after renewed injection of pilocarpine. The author supposes that pilocarpine acts on the peripheral ends of the vagi, exciting the cardiac inhibitory nerves; it is antagonistic to atropia. He further relates three cases of nephritis and one of bronchial catarrh with much swelling, in which the oedema disappeared entirely after pilocarpine had been injected subcutaneously for some time.

**THOMAS ON ASCLEPIAS SYRIACA IN DROPSY AND SCROFULOUS AFFECTIONS.**—Dr. J. P. Thomas, of Pembroke, Kentucky (*Louisville Medical News*, and *New Remedies*, September) has found asclepias Syriaca of value in dropsy, without reference to the nature of the cause, but especially is it serviceable with engorgement of the liver; being in many cases superior to either calomel, leptandrin, or podophyllin. In no case, when used in doses which come short in effect of causing vomiting, does this remedy fail to cause profuse diaphoresis and remove dropsical accumulations.

In scrofulous affections he uses it with *Phytolacca decandra*, aided, when needed, with malt-extract and cod-liver oil. He employs the following formula:

R. Strong decoction of *Asclepias Syriaca*, ℥ xij; decoction of *Phytolacca decandra*, ℥ iv; whisky, ℥ vi; white sugar, ℥ iv. M. From one-half teaspoonful to two tablespoonfuls thrice daily, according to age of patient and effect produced.

He uses the above formula as a vehicle for salts of iodine or arsenic when required.

A tincture made by macerating for fourteen days two ounces of the fresh root, thinly sliced, is the most convenient form for use as a simple cathartic or alterative and laxative. The infusion is to be preferred when diaphoresis is desired.

Not the least antimalarial or antiperiodic power has been discovered by Dr. Thomas in the remedy.

**COLLIER ON KINATE OF QUINIA FOR HYPODERMIC INJECTION.**—Mr. Henry Collier (*Pharmaceutical Journal*) recommends kinate of quinia as a very soluble salt, adopted for administering hypodermically. He prepares it by converting kinate of calcium into kinate of barium, and this, by double decomposition with sulphate of quinia into sulphate of barium and kinate of quinia. The solution which he uses for hypodermic injection contains 1 in 4.

**NEW DRUGS AT THE PARIS EXHIBITION.**—The *Pharmaceutical Journal* gives an excellent report on the exhibit of drugs at the Paris Exhibition, from which we take matter of much interest to physicians and students of *Materia Medica*.

The exhibit of drugs in the French colonial de-

partment may be considered, both for number, arrangement, excellent preservation of the specimens, and value, one of the best in the Exhibition. An excellent descriptive catalogue of the products, which greatly enhances their value, has been published.

From *French Guiana* several well-known drugs are exhibited. The drugs apparently peculiar to this colony are as follows. *Anona muricata* (Anonaceæ).—The leaves are used as a valuable antispasmodic, the seeds as an emetic. *Astrocaryum vulgare* (Palmaceæ).—Under the name of *Aouara* the root is used as an antisyphilitic remedy. *Boerhavia diandra* (Nyctaginaceæ).—Used as an emetic and cathartic under the name of "ipecacuanha du pays". In Martinique it is known as "ipecac de Guiane". *Bignonia copaiba* (Bignoniaceæ).—The bark is used as a purgative, and the leaves as a remedy for the yaws or pian. *Bignonia alliacea*, called "the garlic shrub" from its powerful odour, is used as a febrifuge. *Carapa Guianensis* (Meliaceæ).—Bark used (and also in Martinique) as a bitter tonic and astringent, and the oil from the seeds for healing wounds. *Cedrela Guianensis* (Cedrelaceæ).—Bark used as a tonic and febrifuge. *Coccocypselum tontanea* (Rubiaceæ).—Used for congestion of the liver. The entire plant is used. It might perhaps be worth a trial in this country. *Eryngium foetidum* (Umbelliferae).—Used as a sedative in asthma, and in Martinique the roots are used as an emmenagogue and diuretic under the name of "chardon étoile" or "benit". *Guarea Aubletii* (Meliaceæ).—Root-bark possesses powerful emetic and purgative properties. *Hypericum lactiferum*.—The resinous juice is purgative. *Hyptis capitata* (Labiatae).—Used as a pectoral and sedative. *Justicia pectoralis* (Acanthaceæ). A tea made from the leaves is used as an aromatic pectoral. *Mucuna urens* (Leguminosæ).—The seeds of this plant, commonly known as "asses-eye bean", are used in French Guiana for hæmorrhoids. They are slightly diuretic, but have a considerable hold upon popular estimation, both in French Guiana and in Martinique. *Myristica sebifera*.—The bark is astringent. *Potalia amara*.—The infusion of the leaves is used as an emmenagogue and antisyphilitic; in large doses it is emetic. *Vateria Guianensis* (Leguminosæ).—The seeds are rasped, and mixed into a paste with vinegar as a topical remedy for ringworm; hence the tree is known as "bois à dartres".

From *Martinique* a large number of drugs are exhibited. Some of these are well-known West Indian drugs, and others more properly belong to the East Indies, while a few, such as Paraguay tea and coca, can scarcely be admitted as belonging to the drugs of the island, since they are only cultivated in the botanical gardens.

Among the exports from *Senegal*, the gum of *A. Adansonii* is of dark colour and very astringent. It is used by the Moors for dysentery. Of *Acacia albicans* the powdered twigs are used as an expectorant under the name of "kadd", as well as the roots of another species known as "N'debarga" (*A. microphylla*?). The very astringent pods called nebebe, and the bark of *A. Arabica*, as well as that of *Acacia Sing* ("Singdour") are used in diarrhoea and dysentery. Another species, which has not been determined, but is known under the native name of "Bouille-Bette", is extolled as the antidote to the sassy bark, which is called "Mancona" or "Teli" bark in Senegal. The infusion of this acacia is a powerful emetic.

Although the number of exhibits from the *Gaboon* colony is not large, several of them are of considerable interest. Among the more remarkable drugs are : *Atchimé*.—These poisonous seeds are referred to an undetermined species of *Ignatia*. *Amonum citratum* (Zingiberacæ). The seeds of this cardamom are remarkable for their strong verberna flavour. *Bassia Djavé* and *B. noungou*.—The fatty oil from the seed is used for rheumatism. *Camma bark*.—This bark, the botanical source of which is undetermined, is said to be poisonous. *Haronga paniculata* (Hypericacæ).—The bark and leaves of this plant, called *Ogina-gina* by the natives, is used in the form of fumigation for fistula. *Ilango*.—This is a poisonous plant, belonging to the Orchidacæ, and has not yet been examined. The specimen sent to the Exposition was unfortunately stolen from the bottle on the first day that the building was opened. *Icaja* or *Casa*. This is the M'boundou or ordeal poison of Cape Lopez. It is referred to a species of *Strychnos*. The shrub yielding it grows in inundated districts and is from six to eight feet high ; the long taproot is covered with a reddish bark, which is said to contain the active principle. This is soluble in water and alcohol, according to MM. G. Pécholier and C. Saint Pierre, and has an action analogous to that of nuxvomica. *Inée* or *Onaye*.—This is another powerful poison, consisting of the pounded seeds of *Strophantus hispidus* (Apocynacæ). According to the researches conducted in Russia, England, and France since 1865, this is one of the most powerful of cardiac poisons. *Okanyago*.—This is another poison the botanical source of which is at present unknown. *Tetrapleura Thonningii* (Leguminosæ).—The decoction of the bark is emetic. *Ximenia Gabonensis* (Olacineæ). The fruit is laxative, and the seed purgative.

The exhibits from *French Cochinchina* consist almost entirely of well-known drugs ; a few are less known. *Casuarina latifolia* (Casuarinacæ).—The bark possesses astringent properties. *Cassia Roxburghii* (Lauracæ).—This yields a kind of cassia bark. *Sterculia scaphigera* (Sterculiacæ), native name "Luoi Noi" or "Tambayan". These remarkable fruits contain a quantity of insoluble gum and tannin. They are used for affections of the throat and for dysentery. They have already been described under the name of Bootam-pai-jang.

#### RECENT PAPERS.

A New Medicinal Exanthem. By Dr. F. Freudenberg. (*Berliner Klin. Wochenschrift*, October 21.)  
The Treatment of Variola with Carbolic Acid. (*Wiener Medizin. Wochenschrift*, September 28.)

#### DISEASES OF CHILDREN.

KOLACZEK ON THE ETIOLOGY OF THE MECHANICAL SYMPTOMS OF HIP-JOINT INFLAMMATION IN CHILDREN.—Dr. Kolaczek of Breslau contributes a paper on the above subject to the *Deutsche Medizinische Wochenschrift* for August 3rd and 10th. He observes that the mechanical symptoms attending an affection so frequent as coxitis in children are by no means clearly explained. Even pathological anatomy has scarcely elucidated the mechanical symptomatology of this disease, probably not only because opportunity has been lacking to study it in its early stages, but also because the symptoms observable during life are mostly only functional.

Two theories are even at the present day generally received : 1. The reflex or dynamic theory founded on analogy, according to which articular inflammation of every kind excites a reflex contraction of corresponding groups of muscles ; and 2. The mechanical theory, on which the filling up of the articular cavity by the inflammatory exudation determines the displacement of the extremity. The view already propounded by Brodie and Bonnet, seems to have been entirely overlooked, according to which the pathological positions assumed by the patient are due entirely to the instinctive effort on his part to place the limb in as easy and painless a position as possible. Dr. Kolaczek's own experience, during many years, of hip-joint affection in children, leads him to regard this theory of accommodation as the true and most natural one. He then enters at length into a discussion, from this point of view, of the mechanical symptoms as they arise during the progress of the case. The so-called voluntary limping, which is one of the earliest symptoms of hip-joint disease, he attributes to the desire of the child to shorten as much as possible the period, while walking, during which the weight of the body is thrown upon the affected joint. This halting gait is at first assumed only after the child has been moving about for some hours, since the pressure on the articular surfaces of the joint does not at first excite pain. As the disease progresses, however, the symptoms become more complicated, for the joint becomes more sensitive, and hence further efforts to escape pain. While standing, the affected limb assumes a position of flexion of the hip- and knee-joints, the foot being placed on tiptoe ; there is abduction and rotation outwards ; the anterior superior spinous process on the diseased side of the pelvis is depressed and advanced, and the lumbar portion of the spinal column is curved forwards and laterally ; and this curvature is compensated by a curving backwards of the dorsal portion of the column, with depression of the shoulder on the side affected. These changes are produced instinctively on the part of the child, in order to remove the central line of gravity as far as possible from the diseased joint. This central line of gravity, which, during progression, oscillates between the two hip-joints, is frequently also thrown forward beyond the plane of the pelvis by the child fixing the stretched arms on the knees and so assuming a bending forward position, both in standing and walking ; and by abduction of the limb this line is also thrown outwards. Nor is the assumption justified by observation and fact, that the inflammatory process in the joint excites a reflex contraction of the muscles. For, were this indeed so, it would be impossible to understand those by no means uncommon exceptional cases, in which, with undoubted inflammatory disease of the hip-joint, the pathological position is yet almost or wholly absent. But in such cases there is probably much diminished sensibility to pain, which is therefore only slight and more easily borne. The continued contraction of not only the muscles, but also the fasciæ, notably of the fascia lata and its descending processes, has a great tendency to become permanent, so that the displacement of the limb continues even when the recumbent posture is assumed. As the disease progresses and the patient takes to his bed, a further change occurs in the position of the affected extremity. The flexion at the hip-joint increases, and the limb is now adducted and rotated inwards. This change of position is due wholly to its greater convenience. For, in the horizontal position, the weight of the body



is entirely taken off the hip-joint, and the thigh is flexed in order to reduce the antagonistic muscles to a state of rest; and since the patient naturally lies on the sound side, the affected limb is rested on the sound one. While, in the former stage, the limb is sometimes somewhat lengthened, it is now generally decidedly shortened, owing to atrophy of the head of the femur, and deepening of the acetabulum, and also sometimes, though rarely, to actual dislocation of the femur, through relaxation, atrophy, or rupture of the enclosing ligamentous structures. It is impossible to reconcile this change of position in the later stages of the disease with either of the former hypotheses mentioned; for the group of muscles contracted at the commencement by reflex irritation could not now permit the limb to be placed in a position so opposed to their line of action; nor, on the other hand, can the change in question be due in all cases to destructive dislocation, of which there is only rarely any evidence. And the point of view from which we regard the displacements of the limb in coxitis, is of great importance in the treatment. For, whereas on the former hypotheses the limb will be invariably displaced in the same manner, whatever the position of the body; the practitioner, acting on the accommodation theory, will endeavour to adapt the position of the body so that the limb may obtain the greatest possible amount of ease and rest. And hence, position and mechanical means are most efficacious in the treatment of inflammatory disease of the hip-joint.

W. J. TREUTLER, M.B.

#### COHEN ON INCARCERATION OF THE EPIGLOTTIS.

—In the *Philadelphia Medical and Surgical Reporter*, Dr. J. Solis Cohen calls attention to incarceration of the epiglottis, as a little-known factor in the mechanism of suffocation in fatal cases of spasm of the larynx (laryngismus stridulus) in children. It was the immediate cause of death in two cases under his care.

In the summer of 1867, he had under care a scrofulous male infant, between two and three years of age, with protracted laryngismus stridulus; the suffocative paroxysms, as described by the mother, being unusually intense. On one occasion an intense paroxysm occurred in his presence; and, as it failed to yield to cold water dashed upon the face and neck, or to ammonia held in front of the nostrils, he plunged his forefinger deeply into the child's throat, and felt the epiglottis so forcibly drawn down by the spasmodic action of the arytaeno-epiglottid muscles, that its free edge had become wedged between the posterior face of the larynx and the wall of the pharynx, occluding the larynx completely. Carrying the finger to the left side of the larynx, he found it comparatively easy to free the epiglottis from its incarcerated position; and with the ensuing deep inspiration of air, the impending asphyxia was averted. The nature of the difficulty was explained to the mother, who was instructed in the manipulation necessary to overcome it. The child finally died, some weeks later, in a paroxysm similar to the one described.

The second case occurred during the spring of 1877, in a scrofulous male infant, nineteen months of age. Dr. Cohen had the opportunity of verifying the same sort of incarceration of the epiglottis from spasmodic action, on several occasions, one of which was in the presence of an esteemed colleague, during a consultation held as to the propriety of performing tracheotomy. It was determined to defer the deci-

sion for twenty-four hours, in order to test the efficacy of large doses of bromide of potassium; and shortly before the early hour fixed for the visit on the following morning, the child died in a paroxysm which the mother was unable to overcome by manipulation, although she had previously succeeded in elevating the epiglottis in several paroxysms.

In undoubted cases of this kind, tracheotomy may be absolutely indicated as necessary to avert asphyxia in a recurring paroxysm of spasm.

BARLOW ON EMPYEMA IN A CHILD AGED FOUR MONTHS.—Dr. T. Barlow, in the *British Medical Journal*, August 1878, p. 314, gives the case of an infant, who had been ill six weeks when admitted into the hospital with slight cough. He was emaciated, and had superficial sores on the nates and scrotum. The left side was generally dull, except in the subclavicular region. The presence of pus being diagnosed, an aspirator-needle was introduced, and four ounces of inodorous laudable pus were withdrawn. In thirteen days all chest-symptoms were normal. Dr. Barlow states that the younger the child the more likely is pleurisy to become purulent, and therefore the younger the child the more important it is to ascertain whether there be fluid in the chest or not; because, if fluid be present, it is probably pus, and if pus be present the sooner it is evacuated the better for the patient. The present is the youngest empyemic patient Dr. Barlow has seen.

RICHARD NEALE, M.D.

#### RECENT PAPERS.

On the Operative Treatment of Empyema in Children. By Dr. C. Elias. (*Berliner Klinische Wochenschrift*, September 9.)

#### OBSTETRICS AND GYNÆCOLOGY.

MÜLLER ON INDEFINITELY PROLONGED UTERINE PREGNANCY.—In an inaugural thesis of much merit, Dr. Müller, of Nancy, discusses the question whether the retention of the embryo in the uterus far beyond the period of pregnancy is possible; in other words, whether the cases of so-called "missed labour" have a claim to be believed. He has collected all the known cases in literature, and has subjected them to a critical examination; and the result at which he arrives is, that not a single case of so-called uterine retention of the fœtus is to be regarded as such, but is to be explained in some other way, and that most of these cases are instances of extra-uterine pregnancy. In previous centuries, many cases of retention of the embryo in the uterus have been described. Where sufficient descriptions have been given, the author has found it easy to explain the cases by extra-uterine pregnancy. When the fact that the embryo was capable of development outside the uterus became known to obstetricians, the number of cases of retention of the embryo in the uterus remarkably diminished. In this respect, a hitherto unpublished case which occurred to Stoltz is of much interest.

A woman aged 33, who had had one easy labour in November 1830, felt herself again pregnant, and at the same time suffered from symptoms of peritonitis, which did not entirely disappear during the whole period of pregnancy. Towards the end of pregnancy she had fever. The pain became intolerable, especially when the child moved. At the

end of September 1831, pains like those of labour set in. A medical man endeavoured to apply the forceps, but failed; he then attempted to turn, and, not succeeding in this also, he withdrew. A second surgeon who was called acted on the expectant plan. In the meantime the pains ceased, the woman felt no further movements of the fœtus, and an abundant secretion of milk set in. At the end of December there was a discharge of blood, which recurred at the same time in February, March, and April 1832. In May a new attempt at delivery was made, and as the contraction of the os uteri could not be overcome, large doses of ergot were given. After this the patient became rapidly worse, and died at the end of June. On *post mortem* examination a large tumour was found, intimately adherent to the intestine, and containing the fœtus. No one doubted that this was the uterus, and the case was diagnosed as one of retention of the fœtus in the uterus. Some time later Stoltz made a more accurate examination of the tumour, and succeeded in detaching an uterus 7 centimètres long, with its appendages.

Müller does not deny that the so-called missed labour may occur in animals, but he does not consider it justifiable to draw any conclusion therefrom with regard to the human female, whose uterus has quite a different form from the *uterus bicornis* of animals. In recent French literature, there is not a single trustworthy case of uterine retention. The case of Camerarius, cited by Schröder, is identical with the so-called stone-child (lithopædion) of Leinzell. Freund's case is regarded by the author as one of abdominal pregnancy; and an examination of the cases recorded by Mühlbeck, Liebmann, and other authors, English and foreign, leads to the same results. The author considers "missed labour" as the attempt at parturition at the end of extra-uterine pregnancy, which soon again passes off, and may be followed by retention of the fœtus for many years and its calcification. A. HENRY, M.D.

ENGELMANN ON THREE FATAL CASES AFTER BATTEY'S OPERATION.—In the *American Journal of Obstetrics*, July 1878, Dr. George Engelmann relates the following three cases, in which death ensued after the removal of both ovaries through an abdominal incision. All three were married women. In case 1 the ovaries were removed to bring about the menopause, and thus check the reflex menstrual suffering, which had greatly reduced the patient, and was rapidly hastening her end by exhaustion, if it did not lead to suicide. Case 2 was one of chronic ovaritis, in which the reflex suffering was intense and continuous, steadily increasing, and rendering her, the wife of a working man, a helpless invalid, confined to her bed, with the prospect of still greater trials. The ovaries, especially the left, which was known to be in a state of cystic degeneration, were also directly the seat of much pain. Case 3 was a typical case of chronic ovaritis and ovariægia, with occasional attacks of cellulitis, in which the suffering was mainly confined to the region of the unquestionably diseased ovaries, without marked menstrual exacerbation; but this pain was such as to confine the patient to her bed, and to torture her constantly. It steadily increased, and Battey's operation was performed to remove the offending organs. The operation was not easy in either of the cases, on account of the tension upon the broad ligaments, and the adhesions binding down the ovaries. In the first case only could the ovaries be pulled

up, somewhat partially, into the incision; in the second it was necessary to tie in the pelvic cavity; and in the third, the firm adhesion of the degenerate ovary with the broad ligament to the floor of the pelvis necessitated the exposure of the pelvic cavity, in order to complete the operation. In the first case, the patient, aged 42, was a miserable wreck, a haggard, weak, worn-out woman, with but slight chances of surviving the serious operation, for which she prayed as her only hope. She died of inanition and inability to recover from the shock of the operation. The *post mortem* examination revealed but trifling signs of pelvic or peritoneal reaction. The second, aged 33, was a bright mulatto, in whom the feeble power of resistance characteristic of her colour was not increased by years of suffering. In the third case, aged 31, the operation was tedious and severe, and the patient was weakened by the hæmorrhage following. Notwithstanding the unfortunate terminations, Dr. Engelmann considers that in these three cases the operation was not only justifiable, but that it was decidedly indicated and demanded.

GARRIGUES ON GASTRO-ELYTROTOMY.—At the annual meeting of the American Gynæcological Society, Dr. H. J. Garrigues gave a brief outline of the operation as performed by Joerg, Ritgen, Baudelocque, and Skene, and as it was revived with an important modification by Dr. Thomas, of New York, in 1870. Dr. Garrigues proposed to make the first opening in the vagina with the galvanic or other form of cautery. He urged the propriety of the operation, and thought it should always be adopted instead of craniotomy, when the conjugate diameter was two-and-a-half inches or less, and also of bad cases of embryotomy. In certain cases the operation would always be excluded. It could not be repeated upon the same side. It was impossible when the head was immovably wedged in the pelvis. It was contra-indicated in cases of atresia or coarctation of the vagina, of obstruction of the vagina by a solid tumour, or when the obstruction was situated in the uterus.

COLRAT AND REBATEL ON A CASE OF CONJOINED TWINS.—In the *Lyon Medical*, Drs. Colrat and RebateL describe a monstrosity aged thirteen months. The monstrosity has two heads, four arms, two thoraces, one abdomen, one penis, two testicles, one anus, and two legs. Baptiste and Jacques Tocci were born on October 4, 1877, at Loccana. Their father is thirty-two years old, their mother is only twenty years old, and well developed. She was never pregnant before. As regards heredity, the maternal grandmother bore twins; beyond this there is nothing extraordinary. Neither child has any teeth at present. The skeletons are normal up to the point of union at the base of the chest. The vertebral columns are distinct throughout, each terminating in a sacrum and coccyx. The ribs appear to be complete, and act independently of each other. The children are well developed, lively, and play with full animal spirits. In suckling, their mother gives her two breasts at once. Although there is only one abdomen, it is almost certain that there are two sets of intestines. Defæcation is independent for each child. If one be asleep and the other awake, the waking one can only move the leg on his side. One is sick and vomits, while the other is calm. It belongs to St. Hilaire's class Sysomian.



**MACCULLUM ON A CASE OF CONJOINED TWINS.**—In the *Canada Medical and Surgical Journal*, October 1878, Dr. D. C. MacCullum describes a case of a Sysomian female monstrosity, Marie and Rosa Dronin. The monstrosity was born February 28, 1878. The mother is a fine healthy woman, aged 26. She had been pregnant once before. No information with respect to heredity is given. The union begins at the lower part of the thorax of each, and from that part downwards they present the appearance of one female child. There are two heads, four arms, two thoraces, one abdomen, one anus, one vulva, and two legs. The action of the alimentary canals is independent, and, as in Baptiste and Jacques Tocci, they evidently join just above the common anus. The hearts are also independent. One child cries, the other is tranquil.

FANCOURT BARNES, M.D.

**GOLDSMITH ON THE PITH OF THE DRIED CORN-STALK AS AN UTERINE TENT.**—Dr. W. T. Goldsmith, of Atlanta (*Transactions of the Medical Association of Georgia*, 1878), takes a joint of dried corn-stalk, strips it of its cuticle, and compresses the pith, slowly and firmly, with the thumb and index finger. By this pressure, it is reduced four or five times less than its original size. It has a dilating power equal to sea-tangle or sponge. The corn-stalk tent is easy of introduction. Its rigidity overcomes any slight resistance. Dr. Goldsmith has used this tent for seven years. He has not had a single accident from its use, although he has used it many hundred times. The advantages of this tent are the following.

It dilates effectually, but not too rapidly; it is smooth, soft, and can be removed without force; it produces no lacerations, abrasions, or irritation of the mucous membrane; it can be medicated with any substance as easily as the sponge or cloth tent; it is of vegetable origin, and hence does not become putrid and poisonous to the patient; it may be retained, non-compressed, for days, without injurious results, if no pain occurs; a number of small tents, filling up the cervical canal, may be used for more rapid expansion; it can be prepared in a few minutes, of any desired curve, size, and length; any degree of compression may be given it, or it may be used without compression; it may be perforated, like the sea-tangle, and its power of absorption increased, by pricking its surface.

#### RECENT PAPERS.

- The Treatment of Chronic Metritis. By Dr. A. Martin. (*Berliner Klin. Wochenschrift*, October 21.)  
 On the Menstrual Exanthem, and on Urticaria following the Application of Leeches to the Os Uteri. By Dr. J. Schramm. (*Ibid.*)  
 The Treatment of Metritis and Endometritis, Vaginitis, and Vulvitis. By Professor von Braun-Fernwald. (*Wiener Medizin. Wochenschrift*, September 28, October 5, 19, 26.)  
 On the Manual Separation of the Placenta, and of Portions remaining in the Uterus. By Dr. M. Salin. (*Nordiskt Medicin. Arkiv*, Band x, 3 Häft.)  
 Puerperal Parenchymatous Metritis; Abscess of Uterus; Spontaneous Opening into the Intestinal Canal; Recovery. By Dr. L. Filipeschi. (*Lo Sperimentale*, October.)  
 On Dr. Tarnier's New Forceps. By Dr. V. Maggioli. (*Ibid.*)

#### DERMATOLOGY.

**ROBINSON ON THE NATURE AND PATHOLOGICAL HISTOLOGY OF PSORIASIS.**—Dr. Robinson (*New York Medical Journal*, July 1878) examined microscopically skin from psoriatic patches in all stages,

from their appearance as psoriasis punctata to their final disappearance as fading pigmented spots. The first departure from the normal condition consists in prolongations downward of the Malpighian layer, and as a consequence of this growth the papillary spaces seem larger. The increase in the size of the Malpighian layer arises simply from an increase in the number of cells present in the normal condition. Although the interpapillary spaces are of greater length than the papillæ in the surrounding normal tissue, there is not a corresponding increase in their diameter. Adjoining Malpighian prolongations downward approach each other more or less closely, and produce a corresponding decrease in the size of the upper part of the space separating them.

The blood-vessels are dilated in the different papillæ, and this dilatation is greatest in the centre of the papule and least at its margin. There is an exudation of white blood-corpuscles round the vessels, the number increasing with the degree of dilatation—the dilatation of the blood-vessels, transudation of serum, and the presence of white blood-corpuscles, making up the sum total of the pathological condition present in the papillæ during the early stage of the disease. At the same time, the external root-sheath of the hair becomes increased in size in the same manner as the rete Malpighii.

The further development of the patch is attended by a more exaggerated degree of those changes. The interpapillary projections of the rete widen and deepen; there are œdema of the papillary layer and thinning of the bundles of connective tissue that compose it, and considerable exudation of white blood cells. But the cell-exudation remains limited in a remarkable manner to the neighbourhood of the blood-vessels. There are thus produced in the cutis around the vessels patches of what Dr. Robinson calls "rarefied cutis-tissue". As the disease disappears, the cell-infiltration and œdema generally disappear first, and the hyperplasia of the rete mucosum last; but even after the rete had returned to its normal form, when only a pigmented condition remained, the hair-follicles were found still three or four times their normal size.

Dr. Robinson contrasts these appearances with those found in eczema, and remarks that "the disease is local at the commencement, always remains local, and never affects the general system".

**DUHRING ON INFLAMMATORY FUNGOID NEOPLASM.**—Under this name Dr. Duhring (*Report of the American Dermatological Association*, 1878, *Chicago Med. Journ.*) describes a case in which tumours appeared suddenly in the skin of a woman, new tumours continually appearing whilst older ones disappeared. The tumours were of a raspberry colour, tense, containing no pus, tuberculated, and furrowed. All portions of the body were invaded. The patches were of different sizes, from a split-pea to an egg, sometimes fungoid, soft or firm, lobulated even in the flat portions, smooth or rough, crusted or not, without symmetry. Two similar cases have been previously described, one by Hebra and one by Hans Hebra.

G. THIN, M.D.

**FOX ON THE SO-CALLED PIGMENTARY SYPHILIDE.**—Dr. G. Henry Fox of New York, in a paper on this disorder (*American Journal of the Medical Sciences*, April 1878), arrives at the following conclusions. 1. The pigmentary sypylide, as described by Hardy and others, is not a direct manifestation of

syphilis. 2. It is a non-specific vitiligo, which, though syphilitic in its origin, cannot be properly classed among syphilitic lesions. 3. It is most frequently observed on the neck, but may be well marked elsewhere. 4. It is usually more apparent in females, but by no means peculiar to them, nor is it always associated with a fair complexion. 5. The whitish macules, which form the most important feature of the affection, are not merely white by contrast with the hyperpigmented background, but from a loss of pigment. 6. These macules occur upon the site of pre-existing syphilitic lesions, the remains of which may sometimes be observed as dark central points. 7. The hyperpigmentation surrounding the macules is of secondary importance, although in the majority of cases it forms the most striking feature of the affection. Dr. Fox suggests the following as the mode of development. The maculo-papules of early secondary syphilis, whether upon the neck or elsewhere, induce primarily a hyperpigmentation. At the periphery of these dark stains an atrophy or degeneration of the pigment-cells ensues. The dark stains dwindle to dark points, which speedily disappear, and circular or oval whitish macules of a larger diameter than that of the original lesions occupy their site. The portions of skin adjacent to these whitish macules become, as in ordinary vitiligo, the seat of complementary pigmentation, and thus present a discoloured appearance.

ARTHUR COOPER.

RAYNAUD ON SYPHILITIC LEONTIASIS.—M. Maurice Raynaud (*Société Médicale des Hôpitaux de Paris*) brings to notice the case of a patient attacked by a new form of cutaneous syphilis, named by the author syphilitic leontiasis (subject of the inaugural thesis of M. Coutard, one of his pupils, "Study on diffuse syphilis of the face"). The diagnosis of the case was difficult; there are no syphilitic antecedents, but in the mucous membranes syphilitic manifestations are undoubted, scrofula being excluded by the age of the patient, which was 59. M. Coutard, in his thesis, says that syphilis may produce hypertrophic lesions of the skin, the gummy element, instead of being circumscribed, existing in the state of infiltration. In such a case ulceration is not produced, as it is in the dry, tubercular, degenerative form. The face is the favourite seat of this form of syphilis.

In the discussion which followed, M. Besnier said he would call it a case of papulo-hypertrophic syphilis. In passing, he advanced the opinion that iodide of potassium has an insignificant or no effect in scrofula. This was strongly contested by M. Dumontpallier.

M. Libermann, on the occasion of M. Raynaud's observation, read a paper on elephantiasis in Arabs, which was diagnosed as syphilitic on account of syphilitic antecedents in the history of the illness, but not because of its objective characters, and which was cured in three months by subcutaneous injections of the biniodide of mercury, large doses of iodide of potassium, and a strict regimen (milk-diet).

#### RECENT PAPERS.

A Contribution to our Knowledge of the Etiology of Psoriasis. By Dr. Neumann. (*Allgemeine Wiener Med. Zeitung*, No. 34, 1873.) On Erythema Vesiculosum et Bullosum, Herpes Iris, et Circinatus. By Dr. Kaposi. (*Wiener Mediz. Wochenschrift*, No. 30, 1873.)

#### TOXICOLOGY.

WESCHE ON DETECTION OF CARBONIC OXIDE IN THE BLOOD BY SPECTRAL ANALYSIS.—Two persons died from a leakage of coal-gas into a bedroom in which they were sleeping. One was found dead and the other died two hours after removal. Dr. Wesche (*Vierteljahrsschrift für gerichtl. Med.*, Feb.), noticed a remarkable difference in the blood of the two bodies. That of the one found dead was liquid and of a bright red colour, and the muscles also had a roseate tint. The blood taken from the other body was of a dark red colour, thick, and half coagulated. In the spectroscopic light coloured blood showed the two absorption-bands of the oxide of carbon undergoing a change by the addition of a solution of sulphide of ammonium, while the dark coloured blood of the person who survived two hours showed the two absorption-bands of normal blood, but not so well defined, and it was differently affected by reducing agents. When moderately diluted it showed only one band of reduced hæmoglobin, but greatly diluted it showed the two bands of oxide of carbon widely separated, the space between them becoming gradually darker, so that the greenish yellow colour of the spectrum in which these bands are situated could not be clearly distinguished. The reaction of carbonic oxide was therefore not clearly defined. An examination by caustic soda gave an analogous result—with the first blood it produced a zone of cinnabar red, with the second a dark red zone.

Further experiments satisfied Dr. Wesche that carbonic oxide speedily escaped from blood when oxygen or air was passed through the fluid; hence, while the discovery of the two absorption-bands would show the presence of the gas, a negative result would be of no value if the asphyxiated person had breathed atmospheric air even for a very short period. Experiments showed that carbonic oxide formed but a weak combination with hæmoglobin. These facts explained why the absorption-bands of carbonic oxide were distinct in the blood of the person found dead, while they were not easily discoverable in the blood of the one who survived sufficiently long to breathe air.

[The spectral characters of carbonic oxide in blood have been well described, and illustrated also, in a coloured drawing by Preyer (*Die Blutkrystalle*, Jena, 1871). A solution of blood through which a current of carbonic oxide had been passed, presented two bands very similar to those of oxyhæmoglobin, but they were nearer to E and further from the well-known D line in the spectrum, than the two bands of blood. The addition of oxygen, or of reducing agents, to the solution does not affect these bands.—*Rep.*]

A. S. TAYLOR, M.D.

SEDGWICK ON RECOVERY FROM A POISONOUS DOSE OF CHLORAL-HYDRATE.—Mr. William Sedgwick reports in the *Lancet*, August 1878 (p. 168), a case in which a widow lady, aged 62, of suicidal tendencies, took for that purpose about 240 grains of chloral-hydrate. For thirty-five hours it was impossible to rouse her or to excite consciousness. Her face was pale, and somewhat livid. The eyelids were closed; the pupils contracted to a small point and insensible to light or touch. The limbs were powerless and flaccid. The skin was cold, but not clammy. Pulse 58, small, weak, easily compressible. The breath smelt strongly of chloral, and the respiration, which was slow and feeble, showed



an alarming tendency to cease, if it were attempted to move the patient. The stomach-pump was used, but not satisfactorily, and an induced current of galvanism was directed from the nape of the neck to the præcordial region; which had the effect of increasing the force of the heart's action, and was continued, at intervals, for several hours.

Mr. Sedgwick remarks upon the singular coincidence that, in a case recorded by Dr. Bishop of recovery from 165 grains, the tolerance of such an excessive dose was associated with similar unsoundness of mind, and suggests that the mental condition of the patients may have had an antagonistic influence upon the usual poisonous effects of the drug.

RICHARD NEALE, M.D.

## REVIEWS.

*Lectures on Clinical Surgery.* By JONATHAN HUTCHINSON, F.R.C.S. Volume I, Part I (*On Certain Rare Diseases of the Skin*). London: Churchill, 1878.

The lectures which form the first instalment of the work announced under the above title have for their subjects Molluscum Contagiosum; Varicella Prurigo; On the importance of the diagnosis between Leucoderma and White Leprosy; Can Arsenic cure Pemphigus? General considerations respecting Prurigo; On Prurigo in Infants and Children; Winter Prurigo (*prurigo hyemalis*); Is Hebra's Prurigo met with in English practice? Summer Prurigo; On the Nails, and the diseases to which they are liable; Disease of the nails in connection with the Psoriasis diathesis (*dartrous*); On Ichthyosis; What are Sudamina? The mere enumeration is sufficient to show that the book is an interesting one.

Mr. Hutchinson reports several cases which, he believes, strongly support the idea that molluscum contagiosum deserves the adjective which gives it the distinctive name. "The problem before us in reference to this malady is, *me vatic*", he observes, "a very simple one. We have only to find some form of *contagium animatum* which can explain the production and spread of this sebaceous disease: there is, I suspect, little else to be made out."

In the second lecture, Mr. Hutchinson endeavours to support, by the citation of a number of cases, the statement that "varicella, varioloid, the rash that sometimes attends vaccination, and possibly other exanthems, possess the power in exceptional cases of making the skin irritable, and thus laying the foundation for long-continued and most troublesome conditions of prurigo; and that this consequence is especially apt to ensue when, as is not infrequent in varicella, the eruption is long protracted, and occurs in successive crops".

To understand the full meaning of this statement, it is necessary to understand what Mr. Hutchinson means by the term prurigo, especially as applied to children. This will be best seen by a few quotations from the cases of "varicella prurigo". In the case of George T. (p. 18) we find that "when first seen the child had a copious eruption of vesicles and pustules on the hands, feet, arms, and legs, and a rash of large prurigo patches on the head. There was no evidence of the existence of itch-mites."

"Rosina C. (p. 19) aged eighteen months. . . . A very copious eruption of vesicles or small bullæ on the extremities, trunk, and face. It avoided the flexures, but was very marked on the soles and

palms, and this latter feature led to the suspicion that the case might be scabies, but there was no evidence of the presence of the itch-mite. The vesicles when commencing were very firm and shotty. . . . The rash was attended by great itching. . . . After five months' observation the spots had altered somewhat in character; some of the later bullæ were as large as peas, and it was noted after the child had been attending for some months that many of the spots passed into pustules."

"Edward B., aged sixteen months (p. 19), presented a copious eruption of vesicles and papules in various stages, and affecting the face, trunk, and limbs, and, to a slight extent, the scalp. The fresh spots consisted of elevated pointed papules, feeling very firm, and each surmounted by a small vesicle. In the older ones the vesicle had sometimes broken, but in the greater number it had dried up; on the scalp the spots had sometimes run on to prurigo. There were a few on the palms and soles. The eruption avoided the flexures, and was more abundant on the back than on the chest and abdomen. Excessively pruriginous and numerous scratches."

Mr. Hutchinson remarks that cases like these "have been hitherto counted by dermatologists amongst the considerable group of infantile skin-affections known as lichen infantum, lichen pruriginosus, lichen urticatus, and strophulus pruriginosus."

We venture to think (Mr. Hutchinson's rich experience and recognised authority notwithstanding) that "varicella-prurigo" will fail to establish a claim to be considered as a distinct and independent disease. We hold that a disease, if it is to deserve a place in a nosological table and a name to be known by, must have certain definite symptoms by which it can be diagnosed by competent observers, and especially by which it can be separated from other affections to which in some of its features it may bear a strong resemblance. Thus, for example, papular eczema, lichen urticatus, prurigo (Hebra), scabies, and syphiloderms, have certain features by which they can be recognised from a simple inspection of the surface of the body of a child, without a question being asked. What distinctive features does Mr. Hutchinson's varicella-prurigo possess which would enable an experienced observer to make a similar diagnosis, or which would exclude it from one or other of the diseases we have mentioned?

We do not hesitate to admit that varicella, vaccination, and other exanthemata are occasionally followed by skin-eruptions, but the eruptions are, we believe, produced in such cases by the debility which has followed the febrile disturbance of which the child has been the subject. These eruptions do not differ from similar eruptions, which are seen in children in circumstances that exclude the idea that any exanthematous disease has been at the bottom of the evil.

In the lecture on pemphigus, Mr. Hutchinson brings together a strong body of evidence to show that arsenic cures the disease in a considerable proportion of cases.

As a cause of irritable eruptions in the young, Mr. Hutchinson, in the lecture on prurigo in infants and children, remarks that "we have in infants very intractable pruriginous eruptions, the true cause of which it is difficult to assign. It seems very probable, however, that in a large majority, if not in the whole of these, the exciting causes are local ones, and often connected with the bites of one or other

of the insect pests". The theory is an ingenious one, but fails to carry conviction. If it is difficult to assign a cause in any given case of intractable itching rash in a child, we should for our own part for that very reason exclude the idea of "bites". Fleas, lice, and bugs, the common domestic "insect pests", can fortunately be always recognised by the effects which they produce, if the creatures be not actually seen. We see no reason to credit them with any occult powers by which they can sting untraced, or leave an indelible impress behind them in the nature of a supposed pruriginous habit.

Persons with irritable skin are liable to suffer from pruritus in cold weather; and this liability, with the secondary appearances produced by scratching, has been described by Dr. Duhring as pruritus hyemalis. Mr. Hutchinson's attention has also been directed to this peculiarity, and he gives it the name of winter prurigo, considering that the latter term "is applicable to any malady of which itching is the paramount symptom and cause of aggravation". In the discussions of the various kinds of prurigo which he describes, Mr. Hutchinson alludes frequently to the disease so named by Hebra, and to others of the rarer affections described by the Vienna professor. But it is very difficult to be sure that Mr. Hutchinson, when he uses the nomenclature established by Hebra, and now entitled, from its almost universal adoption, to be considered classic, really has in view the diseases which not only Hebra but the majority of dermatologists in Europe and America designate by the terms employed by Hebra's school. Take, for instance, the following case from the lecture on winter prurigo (p. 104).

"Charles Challice, æt. 28, a healthy married man, had been liable for many years to the occurrence of a few scattered spots on his thighs and arms during winter. His first severe attack was three years ago (1866). During the next winter (1867) he attended at the hospital from January to March; and from March till the middle of October (during a very hot summer) he was perfectly well. In October it again came out severely. *The spots consisted of papules varying in size from a split pea to that of a shilling, deeply congested, almost copper-coloured, and very slightly scaly.*\* They never become moist. They cover the arms as low as the wrists, and slightly also the backs of the hands. They occur also on the whole of the trunk, back and front, and on the upper parts of the thighs. On the arms they are equally abundant on both surfaces. On the back the patches looked very much like the remains of a popular syphilide. They were everywhere arranged with accurate symmetry. He complained that they itched much from cold, and there was general evidence of scratching."

"I feel sure", remarks Mr. Hutchinson, "that this is essentially a pruriginous example of relapsing lichen-psoriasis (lichen ruber of Hebra)."

We shall be much surprised if dermatologists who are familiar with lichen ruber can recognise it under a description in which the papules vary in size from a split pea to that of a shilling, deeply congested, almost copper-coloured, and very slightly scaly.

Is Hebra's prurigo met with in English practice? "I am unable to identify any cases that will fit exactly with the Vienna description of prurigo," is the answer given to this question by Mr. Hutchinson. "The cases", he adds, "to which I have given the name of winter prurigo, agree with Hebra's description in that they are always worse during cold

weather, but they depart from it very widely in the facts that the lower extremities are usually first and most severely affected, that the liability never begins in childhood, and that the patients are not only better but quite well in summer. It is very probable that this disease may assume in the cold of a Vienna winter a far more aggravated type. . . ."

To what extent Hebra's prurigo is met with in London practice, is a question on which we shall not enter; but to those who are familiar with the disease it is quite unnecessary to remark that it has nothing whatever to do with the affection described by Mr. Hutchinson as winter prurigo, and by Dr. Duhring as pruritus hyemalis. The disease described by Hebra is a perfectly independent and recognisable malady, fortunately very rare, but when it does occur not to be mistaken or confounded with any other skin disease attended by itching. In deciding whether a given case is one of Hebra's prurigo—the only disease deserving the name prurigo because it is the only itching skin-disease at present known which, with a distinct pathological condition, does not already bear another and a more appropriate name—it is, we suggest, more satisfactory to leave out of account whether the disease is worse in winter or in summer, or whether the face is or is not free, or whether it has been shown to be curable. We make this remark with special reference to Mr. Hutchinson's criticisms in all the lectures devoted to prurigo. Hebra, indeed, states that the disease usually spares the face, is usually more severe in winter, and that he has in his experience found it, although subject to remissions in which the symptoms are little marked, in effect incurable; but these are not his diagnostic points. We have seen in his own clinique a case in which the eruption was severe on the face; and we say without hesitation that if he met with a case which was worse in summer, and which was fortunately cured, he would only note it as a rare case, would of course modify his views as to its incurability, but would not consider the diagnosis in any way affected. That Hebra's prurigo does indeed occur in England we have reason to know, having seen a case in the out-patient department of one of our hospitals, and having had a case under our care—imported, however, from Australia. It would be very strange if it were not so. The disease is recognised everywhere in Germany; we saw a well-marked case at the St. Louis Hospital, in Paris, where Dr. Duhring, as he tells us in his book, also saw one, and it has been lately observed in America. There is no doubt that it is rare everywhere.

We have occupied so much space with those lectures in the volume which, from the novelty of the views they expound, more particularly invite comment, that we have not left ourselves room to remark on a very instructive lecture on diseases of the nails, and two interesting lectures on ichthyosis and sudamina. The whole volume, indeed, cannot fail to engage the attention of a wide circle of readers, containing as it does the records of a large number of cases of skin-disease, being enlivened in every page by novel views, often ingenious, and sometimes striking and suggestive, if sometimes very highly speculative.

G. THIN, M.D.

*The Throat and its Diseases.* By LENNOX BROWNE, F.R.C.S.Ed. London: Baillière, Tindall, and Cox. 1878.

The author offers this book to the profession as a practical guide to the diagnosis and treatment

\* The italics are ours.



of diseases of the throat. He directs attention mainly to those diseases of the throat, the diagnosis of which depends upon the use of the laryngoscope; while, on the other hand, he omits to discuss at any length questions of purely pathological interest, referring, in this respect, simply to the corresponding parts in von Ziemssen's *Encyclopædia*. We cannot help fearing that this intention, which at once limits the contents of his work to a rather narrow circle, is out of proportion to its great extent and to its price. If a simple guide to diagnosis and treatment were intended, a more unpretending form would doubtless have answered better; while the title and the form chosen raise greater expectations than are satisfied. A book, which bears the title *The Throat and its Diseases*, certainly ought to be complete enough not to compel its purchaser to have recourse to a handbook of anatomy if he wish to be instructed on the anatomy of the throat; to other special works, if more scientific pathological instruction be looked for; and to works on general pathology, if throat-diseases be concerned in which the laryngoscope fails us. Even if we grant these omissions as inconsistent with the author's original plan, there are some other defects, for which no explanation is given at all. Why does Mr. Browne omit altogether the diseases of the trachea? They have certainly quite as much to do with the throat as the diseases of the upper part of the pharynx or of the posterior nares. Why is not a single word said about abscess of the larynx? about complete paralysis of both recurrent nerves? about foreign bodies in the larynx? They are certainly more or less rare affections, but they ought not to have been completely left out in a book on throat-diseases, which deals very thoroughly with diseases of the tonsils and of the uvula. The author holds the opinion, that the addition of histories of cases in detail might be safely omitted (as he has done) because, "when read, which is seldom, they are but very rarely of service to the student". We think that the recollection of an analogous case is, on the contrary, not only very interesting, but often even extremely useful; but this, of course, is a matter of opinion. On the other hand, it is certainly to be regretted, that there are very few special references to the opinions of other authors, especially in those instances in which the author differs from the opinions of acknowledged authorities. This is most remarkable in the chapter on Benign Neoplasms.

So much about the omissions. Before commencing the discussion on that which is given, we have pleasure in saying, that the book is plainly and clearly written, and that the author never forgets that he does not write for specialists, but for the profession at large. There is, however, a certain tendency to describe the worst forms of disease with almost too much copiousness, in comparison with the more common and simple forms. Thus, the general impression which the book leaves in the mind of the reader is, that nearly all the diseases of the throat are rather dangerous affections: a conclusion which is fortunately to be applied in reality to a small fraction only. Perhaps this would have been less remarkable, had not Mr. Browne chosen a somewhat tedious form for the description of the single diseases. It is possible to go too far in methodical description; and the author has fallen into this fault. He distributes his material in such a way, that in each chapter he treats of: 1. Etiology, with the subdivisions—*a*. Predisposing, *b*. Exciting causes; 2. Symptoms—*a*. Functional (voice, respiration,

cough, deglutition, pain), *b*. Physical (colour, form, etc., secretion), *c*. Miscellaneous (external and general, commemorative); 3. Prognosis; 4. Treatment (constitutional, local, operative, diet, hygiene). Thus, he cannot help, in the first instance, creating the belief that nearly all these diseases are very severe; secondly, repeating himself very often; and, thirdly, saying, quite unnecessarily, a good many things which he certainly would not have mentioned, if another form of description had been chosen. The first of these assertions will be proved by a perusal of the book; for the second and the third, a few examples will suffice. It is natural, *e.g.*, that all the diseases which lead to a narrowing of the upper part of the alimentary tract, should create difficulty and pain in deglutition. Thus, a simple narration of these diseases in one line would have been quite sufficient; but the author gives a more or less detailed account of this difficulty in each pharyngeal disease. On the other hand, it is clear, *a priori*, that in a simple case of pharyngitis there is no reasonable ground for expecting any respiratory trouble, nor in a simple case of benign growth for fearing difficulty in deglutition; but Mr. Browne's plan compels him to say something about them. These instances could be easily multiplied. It is partly a consequence of this system, that but little more space could be devoted for the infinitely more important diseases of the larynx, than to those of the pharynx; but this depends also somewhat upon the author's partiality. It is certainly a disproportion, to devote thirty-two pages to the discussion of the diseases of the uvula and tonsils, and twenty only to all the neurotic affections of the larynx together, or five only to the diseases of the cartilages and of the perichondrium. This inequality, of which this is but one instance, is a very marked feature of the book. On the other hand, it is but fair to acknowledge, that the author evidently has spent throughout the work a great deal of trouble in giving good outlines for a successful treatment of throat-diseases; and it is pleasing to see that he does not restrict himself to local remedies only, but gives due regard to constitutional treatment also.

After these general remarks, we can proceed to deal with the single contents of the book. As the usual history of the laryngoscope has been omitted, it begins at once with the demonstration of the Use of the Laryngoscope and the Rhinoscope. This chapter is very well and practically written; and, if verbal description could give a clear explanation of technical apparatus and skill, Mr. Browne's description might fairly claim to have attained this extremely difficult purpose. On the other hand, the following chapter, on the Anatomy of the Larynx, is much less satisfactory. Either a complete description ought to have been given, which certainly would have been most desirable, or the present one might have been quite as well completely omitted.

Chapter III (on the Laryngoscopic and Rhinoscopic Image) gives the appearances of each in plain and well-arranged description.

Chapter IV (the General Semeiology of Throat-Diseases) says, in a short and concise form, the same on twelve pages, as is to be developed later on again much more extensively in two hundred.

Chapter V (Therapeutics of Throat-Diseases) gives the author's ideas as to local treatment, and descriptions of the different agencies which he uses. Opinions, in this respect, are, of course, very manifold; and those of Mr. Browne, being based upon a

large experience, would certainly be entitled to demand due consideration. There are, however, not many essential points in which he differs from generally adopted views, and space does not allow us to enter into discussion upon differences of minor interest. We may only be allowed to say that we cannot see why Mr. Browne combats so violently the practice of blowing medicated powders (morphia, astringents, etc.) into the larynx, as being entirely "unphysiological", if later on he himself concedes this in cases of tubercular laryngitis. As far as we know, in no other disease are insufflations used in this country; but in this disease they certainly prove most useful in diminishing the most disagreeable symptom, viz., the nearly uninterrupted, exhausting cough. The relief, which after the inflation of half a grain of morphia lasts between twelve and twenty-four hours even in late stages of the disease, cannot be obtained by the application of the same remedy in fluid form. The author's objections to some instruments for removing growths from the larynx will be discussed in the chapter on benign neoplasms; as to his objections to the application of the galvano-cautery in the larynx, we simply could refer him to the reports of Voltolini and von Bruns, who have obtained very good results without doing any injury to healthy tissues, a possibility much feared by the author. We think that this is the right place to discuss Mr. Browne's first surgical principle: "Primum non nocere." This principle is certainly a very sound one, and well worth reflection; but if it were to be generally adopted to the extent advocated by Mr. Lennox Browne in his papers and in societies, there would probably be no surgery at all. We most heartily agree with the author, if he complains that unqualified young men, without any practical skill, have been led by an absurd ambition to try so difficult an operation as the endolaryngeal removal of neoplasms (we believe, by the way, that the number of these bold experimenters is extremely small); but is the abuse of any valuable method a proof against its value? Would anybody now believe, if a young practitioner published a list of cases of ovariectomy, which he had performed after Mr. Spencer Wells's method, and nearly all of which ended fatally, that it was the fault of the method? The practical proof being given in any operation that its dangers and difficulties might be overcome by skill, conscientiousness, and assiduity, it ought to be the ambition of every surgeon to attain that amount of these three qualities, which might enable him to be equally successful.

Chapter VI treats of the Diseases of the Pharynx and Fauces. The author is, in our opinion, quite right in defending (in opposition to Dr. Morell Mackenzie) the necessity of constitutional treatment in secondary syphilis of the pharynx. The proposition of employing the galvano-cautery in tertiary syphilis, instead of the application of nitrate of silver, is new, and deserves attention. There is a very interesting case of dilatation of the pharynx by angular curvature of the cervical portion of the spinal column, which proves our previous remark, viz., how desirable similar communications in other diseases would have been. The remarks on retropharyngeal abscess are extremely short.

The following chapters, on Diseases of the Uvula and of the Tonsils, discuss the affections of these parts very extensively. The remarks on primary cancer of the tonsils are interesting.

The following chapter discusses the Diseases of the Naso-pharyngeal Cavity, or, as Mr. Browne calls

it, "the Naso-pharynx". The description, which (especially with regard to the treatment) is very radical, labours only under the same disadvantage which renders several matters in the foregoing chapters somewhat incomplete (e.g., the treatment of syphilitic pharyngitis). We speak of one of the cardinal faults of the book mentioned above, viz., the rather arbitrary limits of the subjects which the author discusses. It is quite as impossible to give a sufficient outline of the treatment of tertiary syphilis of the pharynx, without dealing with the changes produced by the same disease in close proximity to this region (especially perforations of the hard and soft palate and ulcerations of the tongue), as it is to speak about postnasal catarrh with complete omission of the acute and chronic nasal catarrh and of other diseases of the nose (especially of nasal polypi).

The chapter on Diphtheria, which follows, is so arbitrarily written, that it is very difficult to criticise it in a few words. Although Mr. Browne assures us in the beginning, that "no attempt will be made to decide the vexed question of its identity or non-identity with membranous croup, so far as the broad general question is concerned", he, notwithstanding, combats the views of those who hold to the identity of the diseases. We must leave it to our readers to study his arguments at the source.

The three following chapters are devoted to the different forms of Laryngitis—acute, subacute, chronic, syphilitic, and tubercular. We do not see the reason of Mr. Browne's terminology in calling "acute laryngitis" only that form terminating in oedema. (Oedema of the larynx is but one of the terminations of acute laryngitis, fortunately occurring comparatively rarely, whilst a very acute laryngeal inflammation might quite as well pass over into complete restoration to health or into the chronic form. To consider all inflammations of a recent character not leading to oedema as "subacute" from their very beginning, is by no means justified. The statement that "absence of thickening is a marked characteristic of chronic laryngitis, to which may be added immunity from ulceration", is so evidently wrong, that we are rather inclined to believe in a *lopsus calami*, although it is a pity that such an one should occur just in the description of the most important symptom of one of the most important laryngeal diseases. Like every other chronic inflammation, chronic laryngitis leads to thickening of the affected tissues (*vide* von Ziemssen, Mackenzie, Tobold, Burow, von Bruns, and all other authorities who have ever written on this affection); while, on the other hand, there is most certainly not immunity from, but only little inclination to, ulceration.

The quotation of Schroetter's method for the dilatation of laryngeal stenosis after syphilitic ulceration, proves that the author has not understood Schroetter's description. This author does not dilate the stricture from below, through the opening previously made by the operation of tracheotomy, as asserted by Mr. Browne, but from above, through the mouth (conf. Schroetter, *Laryngolog. Mittheilungen*, 1871). The description of the diseases of the cartilages is very short.

The worst chapter in Mr. Lennox Browne's book is certainly that on Benign Neoplasms in the Larynx. We say this very deliberately; not because our own views entirely disagree from those of the author (for we have great respect for independence of opinion), but because we cannot



approve of Mr. Browne's method of *expressing* his own views. If his views differ from those of all acknowledged laryngoscopists, he should (especially in a book which is not written for specialists, but for the profession at large, which has not the opportunity of judging from personal experience) state by *convincing reasons* that his views are the right ones. This can only be done by *facts* and *numbers*, not by startling assertions, for which the only proof is: "I say so." Mr. Browne submits seven propositions for consideration with regard to the propriety of performing endolaryngeal operations. The first is, that attempts at removal of growths from within the larynx are not in themselves so innocuous as is generally believed; but that, on the contrary, direct injury of healthy parts of the larynx, leading to fatal results, is by no means of unfrequent occurrence. This is, of course, a very important and severe argument against endolaryngeal operations,—supposing, of course, that it can be proved. How is this to be done? There is only one way, as far as we can see. The author must collect *all* the cases in which endolaryngeal operations have been performed, and prove statistically that in so many operations there has been such and such percentage of those dangerous occurrences which he quotes as reasons against this method. If he succeed, then, in proving that there is any considerable percentage of these bad results—the operations being performed by skilled laryngoscopists—he would not only be right in making his assertion, but he would have certainly rendered a great service to the profession, by warning against this dangerous practice. Probably the author would have done so, if he could; but, unfortunately, this was not possible. The dangers which Mr. Browne describes are, nearly without exception, only present when these operations are performed by untrained surgeons, who have little or no opportunity of practising in this branch; and even under these circumstances we do not know of serious damages. But if such were done, as Mr. Browne asserts, we must once more insist upon our previous *dictum*, that the abuse of a valuable method never justifies its condemnation. We have gone carefully through the reports of 842 cases of growth operated by such laryngoscopists as Fauvel, Mackenzie, von Bruns, Tobold, etc., and we do not find a single instance of damage done to healthy tissues with lasting impairment to the larynx. This fact is of greater value than all assertions. If perichondritis or other equally fatal results have followed as a direct consequence of intralaryngeal instrumental operations, they would only prove the correctness of our own previous statement, viz., that so difficult an operation ought not to be tried without long-continued training and fairly acquired skill; and that the method should not be made responsible for failures, if this training be omitted.

Mr. Browne's second proposition is: "The functional symptoms occasioned by benign growths in the larynx are, in a large proportion of cases, not sufficiently grave to warrant instrumental interference." It is quite true, as the author says, that impairment of the voice is in the greater half of the cases the only troublesome symptom, dyspnoea being (in Mr. Browne's own collection) present in only thirty per cent. But does the author believe that this impairment of voice is a very unimportant complaint? In doing so, he disagrees not only with all other laryngoscopists, but with the immense majority of the patients themselves (especially of the better classes),

who are generally willing to undergo any operation which promises the chance of recovery from the permanent grave alteration of voice. Here, again, everything depends from the question: Is the endolaryngeal removal of growths too dangerous to be practised, if alteration of voice be the only symptom of the presence of the neoplasm? That "a large proportion of these neoplasms would, if untreated, frequently disappear spontaneously, being subject to slow atrophy and resorption", is, in spite of the noble authority on which Mr. Browne bases this assertion (Virchow), nothing but a hypothesis, not supported by clinical facts. If Mr. Browne have ever seen this happen, he certainly ought to have published the case with all circumstances.

The third proposition is: "Many of these new formations will disappear or be reduced by appropriate local and constitutional treatment, especially when of recent occurrence." This is directly opposed to all other experiences. That a small growth of recent occurrence, exclusively due to localised hyperæmia, may now and then be successfully treated by the local application of caustics, cannot be denied; but these cases are only exceptions. At present, the cases in which the neoplasm springs up under the eye of the surgeon, will be extremely rare; patients, as a rule, consult laryngoscopists only when the growth has already attained a considerable size. In such cases, *i.e.*, in the overwhelming majority, all laryngoscopists agree that the local application of caustics—which must be of course very strong—does not destroy the neoplasm, but irritates the neighbouring healthy tissues. As to the alleged rarity of neoplasms in tender age or of congenital ones, we refer to Bruns's statistics (Bruns, *Die Laryngotomie*, page 177).

The fourth proposition is entitled: "Recurrence of laryngeal growths after removal *per vias naturales* is much more frequent than is generally supposed." The assertion in this form is much too absolute. In 1100 neoplasms, hitherto reported, there were 346 fibromata (31.4 per cent.). As it is well known that these growths never return when extirpated, the author ought to have excluded, *à priori*, this considerable fraction from his general assertion. With regard to papillomata, on the other hand, the frequency of recurrence after removal (especially in cases of multiple papillomata) is even greater than Mr. Browne supposes it, viz., 33½ per cent., but as—especially of late—a good many instances have been reported in which, after repeated extirpation, lasting cure was obtained, this proves only the advisability of the endolaryngeal method.

The fifth proposition is the following: "Whilst primary malignant or cancerous growths are of rare occurrence within the larynx itself, benign growths frequently assume a malignant or even cancerous character by the irritation produced by attempts at removal." Primary cancer of the larynx is by no means as rare as the author believes. He says that he has seen only two cases; but von Ziemssen reports already 96, and von Bruns has since collected 55 others, so that there are now 151 cases on record. Looking through the whole literature which is at our disposal, and which includes nearly all the endolaryngeal operations which ever have been performed, we have been able to find in *two* instances that a papillomatous growth of the larynx had after operation degenerated into a carcinoma. One is Mackenzie's case, mentioned by Mr. Browne; the other, a case of Gibb (*Brit. Med. Journ.*, 1865, p. 328). Thus we have

two degenerations in about 500 endolaryngeal operations for the removal of papillomata. And it is not at all proved, that even in these two cases, the malignant changes were due to the operations. It is well known that benign growths sometimes assume a malignant character without any surgical interference. We would like to draw the author's attention, in this respect especially, to Virchow's opinions thereon (Virchow, *Die Krankhaften Geschwülste*, Band i, page 349). We believe ourselves, that a permanent irritation of healthy tissues might lead to the formation of heteroplastic growths; but the degeneration of benign into malignant neoplasms certainly takes place only when there is inclination to constitutional vice, with or without surgical interference. That even frequently repeated local irritation does not produce degeneration, is proved by a good many instances, in which the endolaryngeal removal of papillomata had, in consequence of repeated recurrences, to be performed from four to six times, until, finally, complete cure was obtained.

His sixth proposition is: "The instruments now most generally in use are far more dangerous than those formerly employed." We can deal very shortly with this assertion. There is no instrument in general use. Mackenzie and Fauvel use forceps; most of the German laryngoscopists use guarded knives; Ströck, his guillotine; Voltolini and von Bruns, the galvano-cautery; others, *écraseurs*, etc. It is not the question, *what* instrument is used, but *how* it is used; and we have shown above that with neither of these instruments in the hands of a skilled surgeon has damage been done to healthy tissues, but the overwhelming majority of patients have been cured.

Mr. Browne's last proposition is: "The cardinal law that an extralaryngeal method ought never to be adopted, unless there be danger to life from dysphagia or suffocation, should be applied with equal force to intralaryngeal operations; and it is a subject worthy of consideration whether, in many cases, tracheotomy alone might not be more frequently performed—(a) with a view of placing the patient in safety, when dangerous symptoms are present; (b) in order that the larynx may have complete functional rest; and (c) as a preliminary to further treatment, radical or palliative." This proposition is but very shortly discussed by the author, "because," as he says, "if the truth of the previous propositions has been proved, there is not much necessity for enlarging on this." We think that, as the author has failed to establish his previous propositions, this one, of course, falls of itself. But if any of our readers wish to convince himself more fully with respect to this question, as well as to Mr. Browne's other assertions, he cannot do better than read the new book of Professor Paul Bruns of Tübingen: *Die Laryngotomie zur Entfernung intralaryngealer Neubildungen* (Berlin, 1878, Hirschwald), from which most of the numbers quoted in this review are taken, and of which we take this opportunity of highly recommending the perusal to all who are interested in the study of throat-diseases. It may be mentioned, by the way, that the first extirpation of a growth *per vias naturales* was not performed by Levin, as the author states, but by Professor von Bruns, senior, of Tübingen. The patient was his own brother. The operation was performed in July 1860. This is a generally admitted and well known fact.

The last chapters are "On Malignant Disease of the Pharyngo-Larynx and Larynx, and on Neuroses

of the Larynx". The former is well written, the latter is disproportionately short (especially the remarks on spasm of the glottis). The quotation of Bäumler's case as an instance of bilateral paralysis of the abductors is erroneous. It was a case of complete paralysis of the recurrent nerve, which subsided with the disappearance of the exciting cause, viz., a very large pericardial exudation.

Having said a few words on the differential diagnosis of laryngeal diseases, and having given a short but useful pharmacopœia for throat-complaints, the author concludes his work with a very incomplete bibliography.

It is very pleasing to us to be able to give unqualified praise to one part of Mr. Browne's book, viz., to the illustrations. They are, in fact, the redeeming feature of his work. Granted their necessity (which is somewhat doubtful in our opinion), we have great pleasure in saying that they are as characteristic and true to nature as could be wished. Sometimes, perhaps, the colour given to the diseased parts appears a little too much dictated by a lively fancy, but the drawing in all instances is excellent. We cannot but regret that Mr. Lennox Browne has not used his high artistic qualifications to publish these illustrations, together with the doubtless instructive cases from which they are taken, as a "Laryngoscopic Atlas", like that of Burow of Königsberg. By doing so, he certainly would have rendered a considerable service to the profession; while, on the other hand, love of truth compels us to say that his attempt at writing a text-book has been less successful than either he or his readers could desire.

## NEW INVENTIONS.

### FOX'S "PALATABLE" CASTOR-OIL AND COD-LIVER OIL.

These were among the earliest, if not the first, of the kind in the market, and have achieved an established reputation in the profession. They have been largely employed, and the proprietors, G. F. Fox and Co., of 8, Bury Court, St. Mary Axe, E.C., are able to boast that they are extensively approved by the medical profession.

## MISCELLANY.

PROFESSOR HITZIG has been appointed Director of the Provincial Lunatic Asylum at Nietleben, near Halle, and will enter on his duties next April. At the same time, he will give a course of lectures on mental diseases in the University.

DR. CARL HECKER, *emeritus* Professor of Surgery and Ophthalmic Surgery in the University of Freiburg, died there on October 28, at the age of 66.

ACTION OF ACIDS AND RENNET ON BOILED MILK. —Herr Schreiner communicates to the *Zeitschrift des österreichischen Apoth. Verein (Pharm. Zeitschrift für Russland, 1878, No. 12)*, the results of his experiments on milk. He finds that boiled milk takes longer time to coagulate *spontaneously* than unboiled does under similar conditions; whilst, on the contrary, it is more easily coagulated by means of acids; from 10 to 12 per cent. less sulphuric acid is required in order to precipitate casein from boiled than from unboiled milk. Again, he found that ten



times the amount of rennet which caused fermentation in unboiled milk had no effect on a boiled portion of the same milk at the same temperature (95 Fahr.).

**WERNICH ON MEDICO-GEOGRAPHICAL NOTES.**—Herr A. Wernich gives in his book (*Geographisch-medizinische Studien nach den Erlebnissen einer Reise um die Erde*, Berlin, Hirschwald) a lively and most interesting account of his experiences during his journey to Japan, where he worked for two years, 1874 to 1876, as academical tutor in the medical school established there. He begins by describing his journey to Japan, having proceeded thither *viâ* New York and San Francisco; on his return journey he came by Singapore, Batavia, through the Red Sea, and over Egypt to Europe. Written in an attractive style, the book offers many interesting data, medical as well as ethnographical, on the districts visited by the author. He describes the constitution of the Japanese, some of their prevailing diseases, etc. Especially noteworthy is his description of Beriberi and Kak-ke, diseases special to Japan and neighbouring parts of the Pacific Ocean.

**MEDICO-LEGAL EXPERTS.**—The recent congress of Legal Medicine in Paris passed the following resolution, which suggests an improvement in the present state of things in this country, for which it would be perhaps utopian to look: "That the government be asked to establish in France institutions which have been at work for years in Hungary, Austria, Prussia, Belgium, Holland, etc., having for their object the formation of experts in legal medicine and experts in toxicology, remunerated by the State, and who shall be elected by *concours*, having for its basis trials essentially practical; that, with the object of educating such experts, a great extension should be given in the different faculties of medicine to courses of practical legal medicine, such as M. Devergie first established at the Morgue in 1834, and which was reopened last year at the request of Professor Vulpian, Dean of the Faculty; and that special courses for instruction in toxicological analysis be opened at the Ecoles de Pharmacie.

**FANCY INKS.**—Since the discovery of aniline, a large number of writing inks have been put on the market, which are praised for their fine colour, ready flow and non-corrosiveness. But most of these have, it is stated on good chemical authority, the serious fault of fading more or less after some time. For ordinary purposes this may be of no account, but under no circumstances should any documents or books, intended to last, be written with such inks. Before trusting to such fancy inks, subject them to a careful test, by exposing some lines written with it to the direct sunlight, for about a month in such a manner that about one-half the writing is securely covered and protected from the light. If after the lapse of that time the least difference is observed in the depth of colour between the two portions, the ink should be rejected.

**DR. ULLERSPERGER.**—Dr. J. B. Ullersperger died on October 15, at Munich, in the eighty-first year of his age. He was born in March 1798, at Neuburg, on the Danube, studied at Würzburg, where he took his degree, and then began to practise at Munich. In 1826 he was appointed physician to the Duke of Leuchtenberg, but lost the post through an indiscreet revelation concerning the health of a friend of the Duke. He returned to his private practice in Munich, and quickly rose in his profession. While he was on the high road to fame and fortune he became involved in a singular entanglement. There was then at Munich a lady who gave herself out and was generally accepted as a "Belgian Princess". At that time there was no Belgian Royal family, so that it was not very clear how she became a princess. She was less remarkable for beauty than for her intellectual gifts and her singularly gracious and winning manners. There was no lack of adherents to her indistinct claims; Ullersperger was foremost among them, and spent his fortune in her service. When he awoke from this dream he found both his practice and his money gone. He began again, and gradually devoted himself to the scientific and literary side of his profession. His in-

dustry was indefatigable. His first contribution was on *Angina pectoris*, in 1848. Next year he published a work on *The Employment of the Saline Springs at Kissingen*. In 1868 he brought out a work on fatal diseases of the brain and nerves, and next year one on diseases of the heart. In 1867 he published a pamphlet on the possibility of curing phthisis, and on *A Remedy for Hysteria, Epilepsy, etc.* The same year he published a work on *The Treatment of Infants and Infantile Diseases*. A work of his on *Ancient Transfusion and Infusion compared with Modern Transfusion and Hypodermic or Subcutaneous Injections*, has been translated into English. He gave considerable attention to the study of the history of medicine in Spain, and published a work upon it at Würzburg, in 1871. He received, during his long life, many marks of distinction from the Bavarian and other Sovereigns and from many universities and learned bodies.

**LONDON SCHOOL OF MEDICINE FOR WOMEN.**—The successful competitor this year for the entrance scholarship of this school, value £30, was Miss Annie McCall. The subjects were English, Latin, Arithmetic, Geometry, and Physics.

**CLASSIFICATION OF SKIN DISEASES.**—The following system of classification and nomenclature has been adopted by the American Dermatological Association. It is based essentially on that of Hebra, with certain modifications:

**CLASS I. DISORDERS OF THE GLANDS.**—1. *Of the Sweat Glands.* Hyperidrosis; miliaria crystallina; anidrosis; bromidrosis; chromidrosis. 2. *Of the Sebaceous Glands.* Seborrhœa—(a) oleosa, (b) sicca; comedo; cyst—(a) milium, (b) wen; molluscum sebaceum; diminished secretion.

**CLASS II. INFLAMMATIONS.**—Exanthemata; erythema simplex; erythema multiforme—(a) papulatum, (b) bullosum, (c) nodosum; urticaria; dermatitis—\* (a) traumatica, (b) venenata, (c) calorica; erysipelas; furuncle; anthrax; phlegmona diffusa; pustula maligna; herpes—(a) facialis, (b) progenitalis; herpes zoster; psoriasis; pityriasis rubra; lichen—(a) planus, (b) ruber; eczema—(a) erythematosum, (b) papulosum, (c) vesiculosum, (d) madidans, (e) pustulosum, (f) rubrum, (g) squamosum; prurigo; acne; impetigo; impetigo contagiosa; impetigo herpetiformis; ecthyma; pemphigus.

**CLASS III. HÆMORRHAGES.**—Purpura—(a) simplex, (b) hæmorrhagica.

**CLASS IV. HYPERTROPHIES.**—1. *Of pigment.* Lentigo; chloasma—(a) locale, (b) universale. 2. *Of Epidermal and Papillary Layers.* Keratosis—(a) pilaris, (b) senilis; callositas; clavus; cornu cutaneum; verruca; verruca necrogenica; xerosis; ichthyosis; ichthyosis of nail; hirsuties. 3. *Of Connective Tissue.* Scleroderma; sclerema neonatorum; morphea; elephantiasis arabum; rosacea—(a) erythematos, (b) hypertrophica; frambœsia.

**CLASS V. ATROPHIES.**—1. *Of Pigment.* Leucoderma; albinismus; vitiligo; canities. 2. *Of Hair.* Alopecia; alopecia areata; alopecia furfuracea; atrophia pilorum propria. 3. *Of Nail.* 4. *Of Cutis.* Atrophia senilis; atrophia maculosa et striata.

**CLASS VI. NEW GROWTHS.**—1. *Of Connective Tissue.* Keloid; cicatrix; fibroma; neuroma; xanthoma. *Of vessels.* Angioma; angioma pigmentosum et atrophicum; angioma cavernosum; lymphangioma. 3. *Of Granulation tissue.* Rhinoscleroma; lupus erythematosus; lupus vulgaris; scrofuloderma; syphiloderma—(a) erythematosum, (b) papulosum, (c) pustulosum, (d) tuberculosum, (e) gummatosum; lepra—(a) tuberosa, (b) maculosa, (c) anæsthetica; carcinoma.

**CLASS VII. ULCERS.**

**CLASS VIII. NEUROSES.**—Hyperæsthesia—(a) pruritis, (b) dermatalgia; anæsthesia.

**CLASS IX. PARASITIC AFFECTIONS.**—1. *Vegetable.* Tinea favosa; tinea trichophytina—(a) circinata, (b) tonsurans, (c) sycosis; tinea versicolor. 2. *Animal.* Scabies; pediculosis capitis; pediculosis corporis; pediculosis pubis.

\* These indicate affections not properly included under other titles of this class.

# The London Medical Record.

## RAYMOND AND NÉLATON ON A VARIETY OF ERYTHEMA MET WITH IN THE COURSE OF TYPHOID FEVER.

MM. RAYMOND and Nélaton report in *Le Progrès Médical*, October 19, the histories of two cases of typhoid fever in the wards of M. Moutard-Martin, at the Hôpital Beaujon, which were accompanied by a very singular eruption, both in its aspect, its course, and the time of its appearance.

Analogous rashes have been recorded, in particular by Griesinger, who says, "In rare cases we observe, at the same time as the roseola, a rash like urticaria."

To the two cases they add a third (Case 1) noticed by M. Moutard Martin.

CASE I. B. M., aged 19, labourer, was admitted July 26th. He said that he had been ill for four days, and that his illness began on July 22 by violent headache, and pains all over him. Since that day, these symptoms had confined him to bed. The day following, they persisted with equal violence; profuse diarrhoea supervened, seven or eight stools daily. On admission in the evening, he was in a state of complete prostration, complaining of headache, and unable to stand erect, or even to sit up, without feeling faint. His face was red, congested; the tongue dry, the gums covered with sordes. Pressure in the region of the right iliac fossa was painful. There was little meteorism; no gurgling; no rose-coloured spots. He felt hot; the temperature was not taken. No *râles* were heard in the lungs. The next day M. Moutard-Martin examined the patient, and found, in addition to these symptoms, a singular eruption situated upon the limbs, trunk, and face, but offering peculiarities in the different positions. On the limbs and anterior abdominal walls it was distributed at irregular intervals in the form of erythematous papules of extraordinary redness; on the back, buttocks, scapulae, and all the parts subject to pressure, it had the appearance of erysipelatous patches; whilst on the cheeks it appeared as elevations of yellow copper colour, contrasting with the reddish-brown colour of his tanned skin. These papules disappeared momentarily on pressure. M. Moutard-Martin at first sight thought of a copaiiba rash, but the patient had not gonorrhoea, he had not taken copaiiba; and, on account of the general appearance of the rash and the physiognomy produced by the elevations in the face, he diagnosed febrile urticaria, with general symptoms of unusual gravity. He was ordered a purgative (a bottle of Seidlitz water), low diet, etc.

On July 28th there were the same elevation of the temperature; the same diarrhoea and headache; but the eruption was better marked and more confluent. On inspecting the throat, the pharynx appeared of a uniform dull red colour; there was evidently a slight erythematous angina. In the evening the temperature reached 40.2° Cent. (104.36° Fahr.), and during the night he became very agitated and delirious, so that it was necessary to employ the strait waistcoat.

On July 29th he was still agitated. His temperature was 39° Cent. (102.2 Fahr.), respiration short, interrupted. The limbs were agitated by continuous trembling. His thirst was great. His tongue was dry, red at the edges, and covered with sordes. M. Moutard-Martin, observing that the ataxic phenomena prevailed, and the temperature remained high, ordered cold enemata and copious cold affusions. These were done first at 4 o'clock on the 29th.

On July 30th he was still in the same state. Cold affusions were applied twice in the day. Some rose-coloured lenticular spots were found. M. Millard, called to see the patient, declared that he had never seen a similar eruption, and was struck with its resemblance to a rash from copaiiba. Nevertheless the typhoid conditions were manifest, and the diagnosis was papular erythema supervening in the course of typhoid fever. M. Millard pointed out the existence of slight effusion in the right knee. The patient had no rheumatic antecedents.

On July 30th, 31st, and August 1, the symptoms continued. The eruption alone was slightly modified, losing some of its brightness of colour, becoming copper-coloured, and resembling the eruptions of syphilis. On August 1 in the evening the patient was better; the jactitation was less; he heard and understood what was said to him. The cold affusions were continued.

On August 2nd there was a sudden fall of temperature, from 39.7 to 36.7 Cent. (103.46 to 98.06 Fahr.). The patient was quiet, and slept nearly all day. From the 3rd the appetite returned, the fever ceased, the patient's spirits recovered; he entered fully on convalescence. The eruption gradually lost its brightness of colour, then it disappeared slowly. The hands and feet desquamated in large patches; the rest of the body showed only brawny desquamation. The patient went out cured on the 17th of August. There was at no time any albumen in the urine.

CASE II. V. M., aged 23, shoemaker, was admitted on August 9th. On August 2nd he was obliged to stop work on account of violent headache and general prostration. On the following days he stopped at home in bed. Besides the headache, he suffered from great thirst and intense heat, and he could not sleep at night. On August 5th he procured a doctor, who purged him; he had not had his bowels open for five days previously, but from this time he suffered from abundant diarrhoea. The symptoms continued without amelioration up to the time of admission.

When the authors saw him, he could not stand without aid; he felt faint; his face expressed stupidity; his tongue was dry and red at the edges; the thermometer in the axilla marked 39 Cent. (102.2 Fahr.). The abdomen was neither distended nor tender. There were numerous rosy lenticular spots on the skin of the abdomen, the thorax, and the thighs. In the lungs, abundant sibilant *râles* were heard. The diagnosis made was typhoid fever, and the following treatment was commenced: a mixture, with 4 grains of extract of quinine; cold enemata twice daily, and *bouillon*. From August 10th to 14th the patient's state slightly improved; the diarrhoea became less. The temperature, which had not been regularly taken, was apparently not above 38.6 Cent. (101.5 Fahr.). He slept the greater part of the night; was contented, and asked for food. The treatment was continued.

On August 15 the temperature rose to 39 Cent.; the patient complained of headache, and was delirious at night. The delirium continued the whole of the



16th. He answered no questions, wandered constantly, and passed his urine in bed.

On August 17th (fifteenth day of the disease) the temperature rose to 40 Cent. (104 Fahr.), and at the same time an eruption appeared on the anus, the neck, and the chest, consisting of papules and patches, irregular in size and shape, slightly elevated above the surface of the healthy skin; they disappeared on pressure. Amid this eruption the rosy lenticular rash could be recognised, having undergone no modification. Inspection showed no change in the pharynx.

On August 18th the temperature was 39 Cent. The eruption was general; on the limbs it was present in their whole length. The soles of the feet were covered with rounded bright red papules, of the size of a lentil. On the leg and thigh these papules were of variable dimensions; there were, too, true rosy patches, some very small, others larger. These last contrasted sharply by their elevated borders with the healthy skin. On the face were a few little rounded elevations, but these were now confluent, forming patches and serpiginous bands of a red colour. The cheeks, the forehead, and the ears were covered with the eruption, but it was most marked on the front of the neck and the upper part of the thorax. At first sight, it seemed like a large red patch situated in the infrahyoid and mammary regions, but, on more careful inspection, this patch could be seen to be composed of papules similar to those on the limbs; its margin was everywhere marked by a slight elevation. The interstices between the papules where the skin preserved its normal colour became very numerous, and larger at the level of the left mammary region, and in that situation there were rounded patches, some as large as lentils or larger, completely discrete, or occasionally coming into contact at some point. Some presented at their centres a red spot encircled by a light ring, in time surrounded by a darker border. Over the back, the buttocks, the scapulæ, wherever pressure was exercised, there was a uniform redness, resembling an erysipelatous surface. Between these patches were smaller ones of all dimensions, like those in other regions. Whilst this eruption was becoming general the temperature fell to 38 Cent. (102.2 Fahr.), and oscillated about this figure during the whole course of the eruption (six days). On the second day the red patches became at first violet, much darker, then grew pale, and resembled the copper colour of syphilitic eruptions.

On the 23rd, the rash had disappeared in many places. On the face, neck, and abdomen there was simply a brawny desquamation, but on the chest particularly, and in other places, the epidermis came off in rounded scales, the peripheries of which corresponded to the dark border of the papules, and their centres to the central red spot. On the hands and feet desquamation was by large patches. Immediately the eruption was at an end, the thermometer went up to 39, 39.8, and 40 Cent. (102.2, 103.64, and 104 Fahr.); the delirium reappeared; a little tympanitis occurred; the diarrhoea continued; the patient passed his urine and fæces in bed without perceiving it. The urine contained no albumen; there was no œdema anywhere; the pharynx was normal. These points are noticed, because the hypothesis of scarlatina complicating typhoid has been suggested. This exacerbation was of short duration, and at the end of a week improvement was daily visible. The patient got up on September 10 quite well. The desquamation continued still in cer-

tain parts, it was furfuraceous. He was discharged on September 15.

CASE III. P. E., aged 20, was admitted August 20th. On admission the patient was in a state of stupor from which he could be roused, and answered questions very well. He said he had been ill for eight days, that he was taken at first with a violent headache, with pains all over the body, and that for some days past he had had copious diarrhoea. He could not now stand, and even when sitting felt faint. He had nightmare at night, and was delirious. On the day of admission we were struck by the state of general prostration; his speech was short; his temperature high, 39 Cent. His tongue was dry, small, and covered with a black crust. The belly was not tender. There were many rose-coloured spots over the abdomen, chest, and arms. The case was plainly one of typhoid fever. Cold affusions and enemata, with fever diet, were ordered. The same evening he was delirious; he was very restless, and his bed had to be made up on the floor to prevent his falling. The urine, examined the same day, was found to contain a great quantity of albumen. These symptoms continued without modification till August 23rd, the temperature remaining above 39 Cent., and the delirium persisting. On the 23rd, in the evening, papules were noticed on the forearms, the thighs, the lips, and the forehead. They were irregular in distribution and size; some were small, not larger than a lentil; others were larger, chiefly on the thighs. They were of a strawberry red colour, and their irregular outlines were sharply defined from the surrounding healthy skin, their edges appearing deeper coloured, and as if bordered by a red band. At the centres of the papules there was a black spot. The whole resembled an insect-bite surrounded by a red circle. Amid this eruption there were still the rose-coloured typhoid spots, with their characteristic appearances. The general condition of the patient was the same. The pharynx preserved its normal colour. The following morning the eruption had made no progress. The next day no traces of it were found. During this time a state of complete stupor had succeeded to the restlessness. The limbs were agitated by incessant movements; the expression of face was stupid and fixed; bed sores formed on the sacrum and trochanters. This state of things lasted till August 29, the twenty-first day of the fever. Meanwhile, slight desquamation was going on, scarcely noticeable except on the upper limbs. From the 29th the patient, although still delirious, felt better; his temperature remained at about 38 Cent. (102.2 Fahr.); the stupor was less, the tongue cleaned, appetite returned, and the patient in his delirium accused his neighbours of stealing his food. Henceforward, although till September 8 in a constant state of sub-delirium, the patient became sensibly better. The temperature fell to 38 Cent., then to 37.6 Cent., and remained at that figure. He ate and recovered his reason. There was still a little albumen in the urine. On September 14 he got up quite convalescent.

In comparing these cases, the authors remark that the first, which was not seen till convalescent, then resembled a case of scarlatina in desquamation. Its course was rapid, and the crisis abrupt; it may have been, therefore, scarlatina with an irregular eruption, or urticaria with very marked general symptoms, as M. Moutard-Martin thought; but the occurrence of desquamation is opposed to that idea.

May the other two cases have been scarlatina supervening in the course of typhoid? M. Berg has

recorded seven such cases, and others are to be found in the writings of Taupin, Rilliet and Barthez, Guersant, Blache, Murchison, and Reynauld. But, according to Berg, these cases were characterised by the usual prodromata of scarlet fever, by the scarlatinal angina, the peculiar strawberry tongue, etc., all which were absent in these cases. These were not cases of scarlatina, for the following reasons: 1. The form of the eruption, and its predominance in parts unusual in scarlatina; 2. The absence of prodromata, and of the concomitant scarlatinal symptoms, angina, state of tongue, etc.; 3. The course followed by the desquamation, which on the trunk, arms, and legs was limited to the raised papules, simulating urticaria; on the hands there were no large flakes. At the same time these symptoms are variable, even in true scarlatina. But scarlatiniform eruptions arising in the course of typhoid fever have been often described, and Murchison insists upon their mode of appearance as having great importance in a diagnostic point of view. Chedevergne says; "In some typical cases the skin takes on a more or less general red tint, which may make us believe in the presence of scarlatina, and it is necessary to delay expressing an opinion if we wish to avoid error." But in the cases he quotes, the redness was *not elevated*, and spread all over the body, but particularly over the face, the forearms, and hands. At the same time perspiration was profuse; the tonsils, soft palate, and pharynx were injected, the tongue was red, and after lasting eleven days the redness disappeared *without desquamation*. In the proceedings of the Société Médicale des Hôpitaux de Paris, for 1873, M. Siredey reports a case in which "towards the fifteenth day of a typhoid fever a scarlatiniform erythema appeared, which, commencing in the right cheek, spread rapidly over the face and neck, and by the following day occupied the whole surface of the body. Almost immediately, in the groins, the axillæ, and on the back, the epidermis was raised by a serous exudation." M. Guyot, consulted by M. Siredey, agreed with him in rejecting the notion of its being scarlatina; nevertheless, desquamation occurred in large flakes. Finally, Wyndham Cottle has published the history of a man, in whose case "the specific rash was preceded by an erythema like measles. The rounded maculæ, occupying in great number the face, the whole of the body, the arms, and thighs, were slightly elevated, definitely circumscribed, smooth on the surface." But after twenty-four hours they disappeared without desquamation.

The authors believe that the eruption in their cases ought not to be considered a scarlatinal rash, and they also believe that it differs in its form, duration, course, and termination, from the different varieties of rashes or erythemata hitherto studied in typhoid fever, including the hæmorrhagic rash.

ROBERT SAUNDBY, M.D.

#### RINGER ON THE INFLUENCE OF PERSPIRATION ON THE FEBRILE TEMPERATURE.

DR. SIDNEY RINGER (*Lancet*, October 1878, page 473), in order to investigate the influence which free action of the skin had in lowering the temperature of pyrexia, made a series of observations on the effects of jaborandi, given directly the temperature rose, previously to paroxysms of intermittent fever.

In Case 1, where the patient suffered from quotidian ague, the temperature rose, in an untreated paroxysm, to 105° to 106° F. Just before the onset of an attack, half-a-grain of pilocarpin was given by the mouth, which, in twenty minutes, produced copious perspiration; yet, in spite of this, the temperature rose to 104.4°; and the fit lasted as long as on previous days. As in ague the temperature during the fits often differs to a greater extent than one degree, it is doubtful if even this slight decrease was due to the jaborandi. The shivering, and the blueness of the lips, nose, and extremities, were but little influenced by the drug.

The next patient suffered from irregular tertian fever, caught in Florida. In an untreated attack on August 1st, the temperature was 104.8°. On August 4, the rigor began at 3.20, when the temperature was 101°, conforming to the rule with ague, that the temperature rises one or two degrees before the rigor begins. Five minutes later, Mr. W. H. Neale, the resident assistant, gave hypodermically a quarter of a grain of pilocarpine. In a quarter of an hour, with free perspiration, the temperature stood at 102.6°; at 4.30, with profuse perspiration, at 105.5; and so continued till 5.30, when the fever began to decline, and became normal after ten hours. On August 10th, at 3.20 the temperature was 101.8°. At 3.30 Mr. Neale gave him a half-grain injection of pilocarpine. At 3.45, with free perspiration, the thermometer marked 102.1°; at 5.30 the temperature was 105° and subsequently 105.2°, remaining so till 8 p.m., when it gradually subsided, and became normal, after the attack had lasted twelve hours. On August 13th, similar results followed the use of the drug. Thus it is seen that while an untreated attack showed a temperature of 104.8° in three fits, treated with pilocarpine which produced a most copious perspiration, the temperatures were respectively 105.6°, 105.2°, and 105.4°. We may therefore fairly conclude that the free perspiration had a very insignificant influence in reducing the febrile temperature, and the increased heat of pyrexia cannot be explained by its accumulation, owing to a dry skin, but must be due to increased production of heat from increased combustion of tissues, especially the nitrogenous tissues, as suggested by the large increase of urea excreted, which is in direct proportion to the severity of the fever. Other reasons may be adduced in support of the view that cutaneous transpiration has but little effect in reducing pyrexial heat.

1. Whenever aconite produces perspiration, a proportionate reduction of temperature ought to take place in all diseases; in many diseases, such as tonsillitis, etc., this does occur, yet in others, although perspiration may be profuse, no fall of temperature is found; for instance, many cases of erysipelas, pneumonia, pleurisy, and especially the specific fevers.

2. Aconite often reduces the temperature without any increased cutaneous action, especially in children.

3. After aconite has produced free perspiration, as in typhoid or scarlet fever, the skin may in a few days again become dry, and yet the temperature remains unchanged.

4. Some years ago, with the aid of Mr. S. Gould, Dr. Ringer tested the influence of the hot air bath in fever cases. Whilst in the hot air bath, the head and face being left out, the temperature did not rise, nor did it fall after the bath, notwithstanding the free respiration and light clothing.

RICHARD NEALE, M.D.



# VON DER VELDEN ON A CASE OF SPASTIC SPINAL PARALYSIS ENDING IN RECOVERY.\*

ONE of the many undetermined points connected with the disease described by Erb under the name of spastic spinal paralysis (*tabes spasmodica*, Charcot) relates to the prognosis. Erb believes recovery to be extremely rare, though less so than in other forms of chronic spinal paralysis. Charcot refused to believe in the possibility of recovery from the disease. Westphal has published one case in which complete recovery took place. In Dr. Kussmaul's Klinik at Strasburg, Dr. Reinhard von der Velden observed the present case; it is distinguished from Westphal's by the acute onset of the disease, and the rapidity with which all the characteristic symptoms were developed.

E. P., aged 27, clerk, had a good family history, and had enjoyed good health, with the exception of a short indefinite illness at seven years of age. No traces of syphilitic infection could be discovered. Slight kypho-scoliosis was present, which, the patient said, dated from birth. Two days before admission, he attempted suicide by jumping into a river; after being rescued, he walked several miles home in his wet clothes, exposed to a high wind, and went to bed. Next day, he complained of pains in the abdomen, and gastric troubles.

On admission, on May 13th, the tongue was coated, and the abdomen somewhat hard and full. There were no other objective symptoms. He had no appetite. There was constipation. Temperature, 100.9; pulse, 82; respiration, 14. Castor-oil was ordered.

May 14th.—He had excessive perspiration during the night; no abdominal pain, but a feeling of pressure on the chest. There were no physical signs, no fever.

May 17th.—He had pains in the region of the bladder, and dragging pains in the testicles. His appetite was good; the alvine secretions were normal. He looked pale and anxious, and refused to get up.

May 18th.—The patient was small and anæmic, with weak muscular development, but was moderately fat. He complained of a peculiar stiffness in the legs, which he first noticed the previous evening. He had no pain, and slept well. No disturbances of circulation, respiration, or digestion were present. On being lifted out of bed he was unable to walk; he could hardly move one leg before the other, and could not flex either knee or ankle. Both legs were stiffly extended by a spastic contraction of all the muscles. A slight tremor was also observable in them. The spasms became more intense while the patient stood, and he was thrown more and more forwards upon his toes. When supported on both sides and taken along the ward, he either let both his legs drag stiffly after him, or attempted, by means of the pelvic muscles, to swing them round alternately.

On being replaced in bed, the muscles of both lower extremities were seen to be strongly contracted, and in a state of constant tremor; the latter, however, gradually passed off when the patient was left quiet and became warm in bed. All movements could be performed, but only very slowly. Passive movement of the limbs met with moderate resistance. After about half-an-hour the spasm also became less

severe; movement was easier, but weakness was still evident. No pain was caused by pressure on the spine. There was no disturbance of sensation; neither trophic nor vasomotor symptoms could be discovered; the sphincters were unaffected; the intellect was clear; there was no vertigo nor inequality of the pupils. There was neither albumen nor sugar in the urine.

May 23rd.—The patient stated that when he was warm in bed, his legs neither trembled nor were stiff, but that he could only lift them a very slight distance; he could not cross one over the other. The attacks of rigidity and tremor occurred two or three times daily, sometimes spontaneously, and sometimes in consequence of external causes. During a strong attack the patient would perspire freely, and afterwards feel quite exhausted. Strong pressure upon the crural nerve during an attack caused the muscular spasm to cease in the leg of the same side, but to become more powerful in the other. By dint of great exertion the patient was able very slowly to flex either of his legs during the period of spasm; as soon, however, as the leg and thigh were inclined to one another at an angle of about 45°, the muscular resistance to the movement suddenly ceased, and the heel was brought with considerable force against the nates. The whole phenomenon very much resembled the sudden closure of a pen-knife after the resistance of the back-spring has been overcome. The limb was now spasmodically fixed in the position of extreme flexion. The spasm could be at once relaxed by exerting pressure upon the crural nerve. If this were not done, and the patient were directed to extend the leg, he was able to do so slowly and with great exertion until it had slightly passed the right angle, when it was suddenly and violently brought into the position of extension.

The tendon-reflexes were greatly increased; sensation was diminished; electric contractility showed no qualitative abnormality, but was somewhat diminished in degree.

Until the middle of June the disease continued to progress; the lower limbs became paralysed. Attacks of spasm and tremor occurred several times daily; occasionally they were spontaneous, but generally they were due to the legs being touched, or to cold; sometimes also to psychic impressions. The patient showed marked emotional disturbance, being sometimes very cheerful and happy, and at others melancholy, despairing, and excited. While in the latter condition, he attempted to divide his radial artery with a piece of broken glass, and twice stealthily obtained half a litre of brandy, which he drank neat. During the drunkenness which followed, he had the most violent spasmodic attacks.

In July the symptoms somewhat abated, and the patient could walk a little with two sticks. In the autumn, the attacks again became more violent; occasionally slight muscular tremor was observed in the arms, and once the speech was affected during an attack. At the beginning of the winter the patient was again confined to bed; the attacks were accompanied by burning pains in the knees, and formication in the legs. In January 1878, he was again up for a time, but became worse towards the end of the month, and, after lying in bed again for some weeks, slight atrophy of the muscles of the legs was noticed. During March and April the patient was usually able to get up, and only had occasional attacks; in the beginning of May he had his last attack; after that he daily improved; at the end of the month he could walk well with a stick, and only

\* *Berliner Klinische Wochenschrift*, September 23rd, 1878.

complained of some stiffness in his knees, and of being easily fatigued. On June 24th he was discharged completely cured, the only symptom remaining being some increase in the patella tendon-reflex.

Two days after his discharge he attempted suicide by drinking a solution containing morphia and ergotin. After the use of the stomach-pump he recovered, but had an attack of acute gastritis. He also had delirium tremens for eight days, brought on by excessive drinking after his discharge. He has since remained quite well.

The treatment of the case was chiefly symptomatic, and directed to diminish the increased reflex irritability. Bromide of potassium, extract of belladonna, warm baths, and galvanisation over the spinal column, had absolutely no effect. The administration of morphia appeared to increase the number and intensity of the attacks. When the spasmodic attacks were at their worst, 30 to 60 grains of chloral, administered *per rectum*, proved useful.

From the middle of April the patient took chloride of gold and sodium, in doses of about  $\frac{1}{8}$  gr. (!) three times daily. Altogether, before his discharge, he had taken nearly 90 grains of the drug. The palliative effect of chloral seems to be established, and the fact of recovery having taken place during the administration of the double chloride of gold and sodium would justify a prolonged trial of this drug in future cases.

As to the pathological anatomy of the disease, it is clear that in this case there could have been no severe anatomical lesion in the nervous system, certainly no definite sclerosis in the lateral columns of the cord. The disease in the present case was developed in a man with an abnormal nervous constitution.

The prognosis does not seem to depend at all upon the mode of commencement of the disease, for in Westphal's case of recovery the affection commenced most gradually, while, in the present case, the essential symptoms of the disease were unmistakably developed within seven days of the severe wetting and cold, which must undoubtedly be regarded as its immediate cause.

The author speaks of the peculiar appearances noticed during the efforts of the patient to flex and extend his legs while they were affected by muscular spasm, as the "penknife phenomenon" (*Taschenmesserphänomen*); its explanation is difficult, but the cessation of the spasm when the limb reaches a certain position may be due to mechanical pressure or tension being exercised in that position upon some nerve. The fact that the spasm could always be checked by pressing upon the crural nerve below Poupart's ligament, favours this view.

CHAS. S. W. COBBOLD, M.D.

## KRISHABER ON SYPHILITIC AFFECTIONS OF THE LARYNX.

IN the first part of a contribution to the study of respiratory troubles in syphilitic disease of the larynx (*Annales des Maladies de l'Oreille, du Larynx, et des Organes connexes*, September 1878), M. Krishaber begins by alluding to the period of the disease at which laryngeal affections appear, and is of opinion that it is impossible to assign a limit to the time at which they may develop. According to an analysis of cases made by himself and Mauriac at the Hôpital Midi, the earlier syphilitic eruptions of

the larynx appeared from two to six months after the primary sore; only once was the interval so great as ten months. The later affections are frequently met with after an interval of perfect health, long after infection, generally about four or five years, but also ten or fifteen, and even much later than this. Sometimes, many years after infection a simple erythema occurs, whose specific character is only revealed by the subsequent appearance of grave symptoms. What seems to be a simple laryngeal catarrh, some time after contamination, may give rise to oedema endangering life; and it is most important to remember that oedema may complicate all forms of syphilitic laryngeal disease, whether recent or of older date. Any laryngeal trouble in a syphilitic subject, though only seeming to be due to a cold, should be treated as of grave import.

Syphilitic vegetations form most frequently without oedema. They grow very slowly, and attack, in order of frequency, the true vocal cords, the false vocal cords, the subglottic mucous membrane, and lastly, any other part of the laryngo-tracheal cavity. The lesions consist of a kind of membranous prolapse at the level of the vocal cords, arising sometimes from one or other surface, and forming a sort of diaphragm which tends finally to bring about complete obstruction. Sometimes true polypoid vegetations occur. It is easy to distinguish syphilitic from simple polypi, as the latter form in a healthy organ, whereas the former are only consecutive to previous lesions, generally ulcerative. There is no clear local sign of distinction between syphilitic and cancerous or tuberculous growths; the diagnosis must be made from other facts connected with the case.

Another form of syphilitic narrowing is caused by the cicatricial contraction of the tissues after loss of substance from deep and extensive ulceration; but when the mucous membrane only is affected, it recovers wonderfully under specific treatment, and it is sometimes scarcely possible to find any trace of the lesion afterwards. Although the acute stenoses are promptly influenced by treatment, the author has never seen the chronic form regress under any kind of medication.

The chronic stenoses are divided into three classes, as follows.

1. Where the glottis is obliterated, and respiration is carried on through the tracheal cannula; voice abolished.

2. *Inspiratory stenosis*. Patients are unable to inspire sufficient air, but can expire enough to cause sonorous vibrations of the vocal cords, if these be not too much implicated; hence there is some degree of voice. Such patients also require tracheotomy.

3. *Incomplete laryngo-stenosis*. Tracheotomy has been avoided. The lesion is arrested, but no improvement occurs. These patients breathe sufficiently to live, if kept quiet, and no complication arise. They may enjoy fair health. The voice is more or less normal.

In these cases wheezing or whistling breathing (*bruit de cornage*) is not in direct relation to the intensity of the lesion.

The prognosis of syphilitic laryngo-stenoses is arrived at especially by noticing the evolution of respiratory symptoms. If these come on slowly, they constantly indicate insidious organic disease leading to a serious result. If, on the contrary, disorders of respiration occur rapidly, they indicate a state of imminent danger; but one capable of being promptly relieved by energetic treatment. Syphilitic lesions



are generally more grave in the trachea than in the larynx, and laryngeal lesions are of more serious import in the subglottic portion than when situated above the vocal cords. Œdema appears to happen most frequently after a chill. Krishaber thinks it well to consider most cases of œdema in non-tuberculous persons as being syphilitic, whether cold be or be not assigned as the cause; and calls attention to the fact that œdema of the larynx is rare apart from any diathesis, whilst in diathetic affections it is the reverse. Therefore, bearing in mind the possibility of relieving syphilitic œdema by general treatment, and without any operation, it is rational to admit the presumption of syphilis, and to act accordingly, although the diagnosis be uncertain.

The treatment recommended to prevent relapse, which is always so likely to occur, is as follows. Once the cure obtained, the patient is to be left without treatment for an entire month. Afterwards, during the first eight days of each month, a teaspoonful of Van Swieten's solution (solution of perchloride of mercury), and during the last eight days of each month a gramme (15 grains) of iodide of potassium. This treatment is to be continued for about a year, for it has been abundantly proved that a patient who has had laryngeal symptoms, however slight, is liable to relapse under the most severe form, after premature cessation of treatment. The author concludes this part of his paper by giving reports of five cases, showing how tracheotomy may be avoided in some of the most urgent cases of laryngeal syphilis, provided the affection be recognised, and active general treatment promptly carried out.

CASE I was one of acute laryngo-stenosis, without œdema (which is rare), due to a syphilitic tumour of the thyroid cartilage causing displacement of the whole larynx. The tumour disappeared under active treatment, and without tracheotomy, although the patient was almost asphyxiated when first seen.

CASE II was that of a patient, aged 45, with multiple erosions and œdema of the larynx. The patient, although improving under treatment, neglected to attend. When next seen, the difficulty of breathing was so great that tracheotomy was proposed. The patient, however, refused to submit to the operation, and quite recovered under the active administration of mercury and iodide of potassium.

CASES III and IV also illustrate the good effects of active treatment; both were extremely severe, one having been sent for immediate tracheotomy.

CASE V was that of a patient aged 42, sent to M. Krishaber for tracheotomy on account of extreme difficulty of breathing. The laryngoscope showed inflammatory œdematous swelling of the epiglottis, and false vocal cords, and œdema below the glottis. Under active mixed treatment, respiration became normal in fourteen days. Nitrate of silver was also applied locally, but did not seem to have any good effect.

ARTHUR COOPER.

#### REMOVAL OF A FOREIGN BODY FROM COLON BY LAPARO-ENTEROTOMY; RECOVERY.

By Dr. C. STUDSGAARD, Copenhagen.\*

[DR. STUDSGAARD begins his paper with some remarks on the introduction of foreign bodies by the mouth, and their removal from the stomach by operation; and proceeds as follows.]

Far more rarely than through the mouth, a foreign body is introduced into the intestine through the anus, sometimes accidentally in falling, sometimes voluntarily for different reasons, the true nature of which it may be difficult to ascertain. Perforation of the rectum, with its consequences, easily occurs in traumatic cases; in the others, the rectum is more or less completely obstructed, and the foreign body may generally be removed by some manual operation or other, when it is not expelled by tenesmus or carried out with the excrements. Examples of this are now and then found in the periodicals, and it seems to be a common occurrence in France to introduce *per anum* glass vessels of various sizes. Four cases of extraction of such are known to me, related by Velpeau, Maisonneure, Morel-Lavallée, and Nélaton. In the Museum of Anatomy and Pathology at Copenhagen is a longish oval flat stone, about 6½ inches long, 2½ inches wide, 1½ inches thick, and weighing nearly two pounds, which a patient in Bornholm introduced into his rectum, to prevent prolapse, from which he had for a long time suffered. The stone was extracted by a surgeon, Frantz Dyhr, in 1756. In quite exceptional cases the foreign body glides so high up that it lies in the sigmoid flexure or even in the transverse colon; and I will now relate the three only cases of this which I have succeeded in finding, in order to compare them with a fourth, which I myself have had the opportunity of treating.

1. Reali operated in 1849, in the hospital at Orvieto, on a peasant who nine days previously had introduced a piece of wood into the rectum, for the purpose, as he said, of economising his food, and preventing it from passing out too quickly. He had violent pain. On exploration, the finger could feel the base of the piece of wood lying in the hollow of the sacrum, and surrounded by the broken mucous membrane. As repeated attempts at extraction led to no result, Reali made an incision in the right iliac region, and found that the foreign body lay in the sigmoid flexure, which it had dilated and pushed to the middle line nearly as far as the umbilicus; he incised the intestine, removed the foreign body, and closed the intestinal wound by Jobert's method. The patient was treated by purgatives (!) and had entero-peritonitis and abscess in the iliac fossa, but recovered, and two years afterwards was in perfect health. The foreign body was a piece of chestnut wood of the shape of a truncated cone, 10 inches long, and about 3½ or 4 inches in diameter.

2. A little case with very ingenious housebreaking and other thieves' instruments was found by Dr. Closmadeuc at the necropsy of a man in the prison at Vannes. The man had died of acute peritonitis, from which he had suffered seven days. During his illness, a hard, rather large body was felt in the left side of the hypogastrium; he said that it was a piece of wood containing money, which he had introduced into the rectum; this, on exploration in the meantime, was found empty. On section, the case, which was cylindro-conical in form, lay in the transverse colon, with its apex directed towards the cæcum; it was of iron, and was wrapped in a piece of lamb's mesentery; it weighed about 23 ounces, was about 6½ inches long and 5½ in circumference, and contained thirteen tools and some coins. Such tricks of criminals are well known to jailers, who are aware that prisoners are accustomed to hide articles in the rectum; but they are usually introduced with the large end upwards, and the passage into the transverse colon, Closmadeuc thinks, may be explained

\* *Hospitals-Tidende*, July 24, 1878.

by the fact that the foreign body was introduced with the small end upward.

3. Ogle related the following case in 1863, at a meeting of the Royal Medical and Chirurgical Society of London. In a young man, aged 17, there was found a swelling of the size of two eggs under the right false ribs. After sixteen days there escaped *per anum* a stick ten inches long, which, the patient said, had been introduced into the rectum four months previously.

The fourth case belonging to this category is the following, which I treated in the Communal hospital.

Hans F., a servant-man, aged 35, was admitted on January 10, and discharged cured on April 16, 1878. The day before his admission he had introduced into the rectum an empty truffle-bottle, with the open end upwards, with the object, as he said, of stopping a diarrhoea. On the morning of the 10th he felt severe pain in the hypogastrium, and sought medical aid. Chloroform was given, but the bottle, which before the narcosis could be felt in the rectum, passed higher up, and he was brought to the hospital. He was exhausted by the journey and by the constant pain, and had a single slimy stool. The bottle was felt in the hypogastrium (which was somewhat distended) lying to the left of the middle line, with its lower end close over the horizontal ramus of the pubes. In the evening profound narcosis was induced, and the rectum was divided posteriorly, and the hand was introduced as far as the sphincter tertius, which presented greater resistance than one could venture to overcome; and, as the bottle could not be recovered, an attempt was made externally to push it down, but it came in front of the rectum surrounded by a portion of intestine. Laparotomy was therefore at once performed antiseptically. An incision about four inches long was made in the linea alba, from the umbilicus downwards; a loop of intestine, which appeared to be a part of the sigmoid flexure, protruded with the neck of the bottle foremost; an incision was then made over the mouth of the bottle and down the neck, and it was slowly withdrawn. The surrounding parts were protected by sponges and compresses against the escape of feces; and, after the intestine had been cleansed, the wound in it was united by twelve or fourteen catgut sutures, which, for safety, were tied with three knots. The gut having been replaced, the wound in the linea alba was united by eight silk sutures. The operation lasted one hour.

The bottle (of which a full-sized representation is given) measured  $6\frac{3}{4}$  inches in length, 2 inches in diameter at the base, and  $1\frac{1}{5}$  inches at the upper end. The mouth was broken, the fracture being apparently of old date) leaving a gap about one-fifth of an inch wide, and as deep, with sharp edges. Recovery was slow, and the prognosis was for a long time doubtful, on account of local peritonitis and formation of abscesses, which opened partly through the incision in the linea alba and partly through the rectum. Two days after the operation, flatus began to escape *per anum*; on the eighth day his bowels were spontaneously opened, and on April 16 he was discharged cured, without a trace of pus. The sphincters had for some time performed their functions normally.

Several points in the history of this case demand closer inquiry; and the earlier recorded cases of a similar kind may, in certain directions, furnish materials to aid in its correct appreciation. With regard to the motive for the introduction of the

foreign body, it certainly cannot be denied that the patient's statement was true—that the bottle was intended as an obturator, and perhaps also as a receptacle for the excrements.

It will next be interesting to ascertain why the bottle passed up into the sigmoid flexure, seeing that, shortly before this, it was felt by a medical man in the rectum. Although it may readily be supposed that, during the repeated and ineffectual attempts at removal that were said to have been made before anæsthesia was induced, the bottle might be forced higher and higher up instead of being brought down, I nevertheless think that there must have been quite another factor. The three articles found in the sigmoid flexure and colon—the bottle, case, and piece of wood—were all more or less conical, and in all three cases the foreign body was introduced into the rectum with the smaller end upward. I think that the passage upwards must have depended on the contraction of the circular muscular fibres, caused reflexly by the irritation of the foreign body, and that the contraction acted most powerfully on the lowest and greatest circumference, and thus pushed the body higher and higher up, by an abnormal antiperistaltic action. That the cause of this may be most readily sought in the peculiar shape of the foreign body, and in the manner in which it dilates the intestine, is confirmed by the reports from French prisons, in which it is stated that cases of thieves' tools can nearly always be pressed out of the anus when they have been introduced with the broad end upwards; also by the fact that the upward wandering has been observed in only a few cases; in the majority of cases, foreign bodies introduced *per anum* remain in the rectal pouch until they are expelled or extracted.

Finally, a doubt may be thrown on the propriety of operating on the patient, as some may be of opinion that an operation was on the whole, not indicated; others, that it should have been deferred. On this I may remark, that it was indeed contemplated to attempt extraction by the introduction of the hand into the rectum by Simon's method; this was attempted, but was found impossible; for I could not succeed in passing more than the tips of two fingers through the sphincter tertius in the region of the promontory of the sacrum, which was easily reached, as the rectum was divided backwards in the middle line as far as the point of the coccyx, and the resistance was so great that I did not venture to force the narrower part. Simon's statement that three or four fingers can be passed through the upper part of the rectum and a little way into the sigmoid flexure, is scarcely correct in general; at least, I have often been obliged to abstain therefrom on account of the great resistance, notwithstanding the comparatively small circumference of my hand. It is possible that the resistance which I encountered lay in the circular spasm, which also prevented the bottle from slipping down into the rectum when pressure was applied externally; but its pressure downwards in a loop of intestine may also be explained by supposing that it had already reached some way into the sigmoid flexure, and that the pressure is more readily made in a direction downwards and forwards than downwards and backwards on a long solid cylindrical body lying in the long axis of the hypogastrium. Fortunately, this attempt was soon given up, for, as was afterwards shown, the upper circumference of the bottle was broken, and stronger pressure on it might easily have produced a penetrating wound of the intestine. There remained



only the alternative of letting him run the risk of laparo-enterotomy, or of waiting; and I decided for the first, on the following grounds. It seemed to me far more probable that the foreign body would produce peritonitis, with symptoms of ileus, than that it should be expelled by peristaltic action; moreover, I assumed, and still maintain, that it was pushed up by active muscular contraction; and that the passage of so large a body from the abdomen by local inflammation and ulceration would expose the patient to at least as great danger as would an artificial incision, might well be assumed; just as it depended on mere accident whether the resulting peritonitis would remain local. I therefore preferred immediate laparo-enterotomy, and chose to go in the *linea alba*, as in ovariectomy, instead of making an incision over Poupart's ligament, partly on account of the ease of healing, partly because, a short time previously, in making an artificial anus in the sigmoid flexure in a case of cancer of the rectum, I noticed how little room an oblique incision gives, in consequence of the course of the fibres of the oblique muscles.

With regard to the treatment of the operation-wound, Lambert's intestinal suture (inversion of the edges of the wound so that the peritoneal surfaces lay in contact) was preferred on the ground of simplicity. Of the advantages and disadvantages of operating antiseptically by Lister's method when the periosteum has to be opened, I defer speaking until another opportunity; I will only say here that I believe I have seen the use of it in enterotomy.

The results of the four cases in which foreign bodies passed up from the rectum into the large intestine have been as follows: one recovery after spontaneous expulsion (Ogle); one death from peritonitis without operation (Closmadeuc); two recoveries after laparo-enterotomy (Reali and Studsgaard).

A. HENRY, M.D.

An account of his case was sent by Dr. Studsgaard to the Société de Chirurgie in Paris, and read by M. Tillaux at a meeting on October 9th.

M. Tillaux thought the author had done rightly, that the operation had been indicated, and success had crowned the effort. He knew the gravity presented by foreign bodies in the intestine, and he remembered a case he saw last year where a man had introduced a bougie into his rectum. The first day the efforts at extraction had been ineffectual, but the next day the body had been removed. Nevertheless the patient died of peritonitis, and at the necropsy a small wound of the intestine was found, brought about by the pressure of the extremity of the bougie.

M. Verneuil said this report raised many important questions. It was well known that the mortality was great in cases of foreign body in the intestine. Certainly it could be expelled by the natural passage, and too great haste on the part of the operator was hurtful. It was also certain that its presence would provoke the formation of an abscess, which would burst, and the foreign body be discharged with the pus; but oftener it was necessary to interfere directly to cause its expulsion. This intervention should not be to the extent that was formerly supposed. One of his pupils last year had written an important thesis, wherein were recorded most of the known cases where foreign bodies had been extracted by opening the stomach; the number of successes was considerable. It seemed to be the same in opening the intestine, and the observations of M. Studsgaard in his report were of great im-

portance. They taught us to be less timid, and when the position and the volume of the foreign body had been carefully determined, opening the intestine should be attempted. He asked M. Tillaux if he did not think that, having attempted the operation, resection of the coccyx might not have been advantageously combined with the rectotomy practised by M. Studsgaard; for one could, with this resection, manœuvre in the small cavity with much greater facility. He asked, also, if the incision made in the median line was not of much less value than one made directly over the left iliac fossa; then, in the case where there was commencing peritonitis, and perhaps sloughing, would it not have been better to make a false anus than to have sewn up the gut and returned it into the abdominal cavity?

M. Després was astonished that such a formidable operation should have been undertaken. M. Studsgaard said in his observations that he had felt the foreign body with his finger. If the finger could touch the foreign body, it ought to have been extracted. Forceps, with the blades guarded by caoutchouc, for seizing the bottle, would perhaps have been sufficient.

M. Lucas-Champonnière did not share this view; surgeons of incontestable dexterity had been thwarted very often in their efforts of extraction, so that the proposition of M. Després could not be entertained. He thought that opening the intestine was not so grave an operation as was formerly supposed, and cited an observation to prove this.

M. Marc Sée thought that nothing should be done hastily, as radical interference was occasionally useless; sometimes the foreign body became displaced, and assumed a different position, which permitted its extraction. He mentioned the case of a patient whom he had attended, who was suffering from a colloid tumour of the rectum, which rendered defæcation almost impossible. Dilatation was attempted with a large gum elastic cannula. One day the patient passed the instrument too far, so that it disappeared into the rectum. For eight days all efforts at extraction were futile, but on the ninth day, he could not say how, the cannula changed its position, so that it could be seized with the blades of the forceps, and readily withdrawn. The patient died, but slowly, from the progress of the cancer.

M. Tillaux replied to the different objections which had been addressed to him. Perhaps resection of the coccyx would have afforded more room for action, but still it would not have permitted the extraction of a body so voluminous and situated in the iliac fossa. As to the incision in the iliac fossa, M. Studsgaard had considered that, but it had appeared to him that he would have much more space by incising in the median line. In his own particular case he had not discussed the question of an artificial anus, as peritonitis had not shown itself.

T. F. CHAVASSE, M.D.

#### SMITH ON THE USE OF DEFIBRINATED BLOOD FOR RECTAL ALIMENTATION.

THE following provisional report, made to the Therapeutical Society of New York by Dr. Andrew H. Smith, appears in the *New York Medical Journal*, July 18th, 1878.

The material at hand for this report is extremely meagre, consisting merely of two experiments by myself, and six cases—three by myself, two by Dr. Douglass, and one by Dr. Haddon. Still, the results

which have been attained are sufficiently favourable to give encouragement for a further trial of the treatment, and it is with the hope of inducing the members of the society at large to give it a thorough test that the committee make this report.

EXPERIMENT I.—A healthy man, aged 40. Nine ounces of defibrinated bullock's blood were injected into the rectum at 11 p.m., the bowel having been previously cleansed by an enema. At 8 a.m. of the following day the contents of the rectum were voided, and consisted of less than two ounces of a semi-solid substance resembling currant jam. When this was examined under the microscope, it was shown to contain a large proportion of faecal matter and granular *detritus*, but scarcely a blood-corpuscle was to be recognised.

EXPERIMENT II.—This experiment was a repetition, two days later, of the first, and was attended with precisely the same result.

CASE I.—To a female patient aged 41, suffering from extreme irritability of the stomach, consequent upon septicaemia from a wound in the neck, one ounce of beef's blood was administered by the rectum every two hours during the night, for four days, beginning December 25th, 1877. The pulse ranged at first from 116 to 132, and the temperature from 101° to 105°. Two ounces of a mixture of quinine, brandy, and milk were also injected every two or three hours. There were from two to four passages from the bowels in each twenty-four hours, aggregating, on an average, eight ounces in bulk. No food was given by the mouth; but iced champagne, to the amount of about eight ounces in the twenty-four hours, was taken into the stomach. The patient was very fully nourished, and had no desire whatever for food. After four days the injections were gradually diminished in frequency, and stomach alimentation was resumed in like proportion. The result of this observation was that, of twenty-four ounces of blood, administered daily, more than sixteen ounces were absorbed.

CASE II.—To a patient with tubercular laryngitis, great dysphagia, preventing the digestion of sufficient food, enemata of beef's blood were ordered. After the first day they produced general abdominal pain, and were speedily rejected, so that their use was discontinued. The patient stated that his bowels had always been extremely sensitive, and that the slightest cause would bring on colic and diarrhoea.

CASE III.—Mrs. S., aged 26, was confined three months ago, and suffered from protracted hamorrhage, extending through several weeks. She came under my care March 16th. She was anæmic to the last degree. Her face was tallowy, white lips almost bloodless. Pulse ninety-six, and very small. She could walk but a few steps at a time. She had not been down stairs since her confinement; she complained of shortness of breath, giddiness, and mental confusion. She was very despondent. She had an absolute disgust for solid food, and vomited it if taken. She had been living principally upon beef-tea, milk, and lime water. Pepsin and simple bitter tonics were prescribed with little, if any benefit. On the 19th of March she began the use of enemata of blood. Four ounces were taken three times a day; the patient retained the injections, the bowels on one occasion not being moved for forty-eight hours. There was very prompt improvement in strength; within a week she was able to go out-of-doors and walk several blocks. The lips and conjunctivæ regained their colour, the stomach became less irritable, the vertigo disappeared; and, in less than three weeks, the only traces of her illness remaining were some shortness of

breath when going up stairs and occasional nausea after a full meal. On several occasions the use of the blood was omitted for a short time, and she immediately felt a decline of strength and spirits. This patient had been under the care of a very intelligent practitioner for three months before I saw her, and it is fair to presume that the usual means for correcting anæmia had been employed. While under my care she had very little treatment except the enemata, and it seems to me that her improvement is to be attributed chiefly to their use.

CASE IV.—A female, a patient of Dr. O. B. Douglass, had phthisis in the third stage. She had extreme irritability of the stomach, and vomited everything taken. Enemata of blood, five ounces three times a day, were ordered, at my suggestion, early in March, and have been continued until the present time. Cod-liver oil with ether was begun at the same time, and was well borne by the stomach. The patient, who was unable to rise from her bed, now sits up and walks about the room, coughs less, and feels in every way much better. What share the oil and the blood respectively have had in her improvement it is difficult to determine. A noteworthy fact in this case is that, after the enemata had been about three weeks in use, the stools, which before had been of a red colour, lost all traces of blood, and resumed the colour which they had before the blood was given; thus indicating a very complete absorption of the injected material.

CASE V.—A female, patient also of Dr. Douglass, with phthisis in the first stage, has used the blood since early in March, and retains it well. At first she improved under its use, but of late has remained about stationary.

CASE VI.—A female, patient of Dr. A. Hadden, with cancer of the stomach, *for fifty-four days was nourished exclusively by the rectum*. During one week of this time, at my suggestion, the injections consisted of defibrinated bullock's blood, with occasionally a little milk. At the end of that time an increase of the stimulant was deemed necessary, and milk was substituted for the blood, as being a more convenient vehicle for the brandy. The blood answered completely the purpose for which it was employed, but the family objected to its use on account of the extreme fetor of the dejections. This is the only case in which this has been observed.

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#### PEPPER AND OTHERS ON THE INTRA- VENOUS INJECTION OF MILK IN FUNCTIONAL AND ORGANIC ANÆMIA.

DR. WILLIAM PEPPER read a paper with the above title at the County Medical Association, New York (*New York Medical Record*, Nov. 16), giving an account of two cases in his hospital practice, in which milk had been injected into the veins.

CASE I, was that of a female, aged 32, who was admitted to the University Hospital, in the spring of this year, in a condition of extreme anæmia and spinal irritability. The operation of injecting the milk was performed by Dr. Charles T. Hunter. The cow from which the milk was obtained was brought into a room adjoining that in which the patient lay. At the first injection, five ounces of milk were thrown into the circulation. Twenty-seven days later, six ounces were injected. The immediate effects of the injection were remarkable in both cases. They were, great respiratory disturbance, capillary injection, etc., a rapidly developing and disappearing urticaria.



From the time of the second operation, July 17th, the patient's condition improved greatly; she gained flesh and colour, and her nervous phenomena disappeared.

CASE II, was that of a sailor, 33 years of age, who was admitted to the University Hospital on May 6th, 1878, with Addison's disease. The regular proportion of red corpuscles had been reduced 75 per cent. On June 15th, six ounces of milk from the same cow were injected into the median basilic vein. One week later the operation was repeated, and again on June 27th. The patient died soon after the third injection; a *post mortem* examination revealing medullary *anæmatosis* in the marrow of the long bones and the sacculated suprarenal capsules.

With regard to the transfusion of blood, Dr. Pepper held: 1. That transfusion must be dexterously performed, and that carefully defibrinated blood must be used; 2. That not more than seven ounces should be injected at one time; 3. That in all cases dangerous nervous and vascular symptoms were liable to follow the operation; 4. That these after-symptoms might be moderated by large doses of quinia administered before the operation; 5. That albuminuria might follow the operation; 6. That the transfused blood stimulated the circulation and nutrition strongly for a short time; 7. That transfusion of blood might be employed for temporary relief in functional diseases, time being thus gained for the use of other measures; 8. That transfusion was of no use in serious organic disease, the risks of transfusion being great where the heart and circulation were weak.

With regard to intravenous injection of milk, the speaker was of opinion: 1. That none but fresh milk at a temperature of 100° should be used; 2. That not more than six ounces should be injected at one time; 3. That the after-effects were as severe as those following the transfusion of blood; 4. That there was no danger of embolism following the intravenous injection of milk; 5. That albuminuria generally followed the operation; 6. That the stimulating effects of the milk were felt immediately; 7. That milk did not produce as lasting effects as blood; 8. That the intravenous injection of milk in organic anæmia might hasten the result (see Case II above).

Dr. Charles T. Hunter, describing the operation, said that he made an incision one-half inch long, over the course of the median, basilic, or cephalic vein, dissected out the vein, raised it on a grooved director, and then plunged the cannula directly into it. He did not think it necessary to tie the cannula *in situ*, as it was sufficiently constricted by the wall of the vein.

Dr. H. H. Smith wished to know why it was not possible to enter the vein through the skin, and without dissecting it out.

Dr. Hunter replied, that, upon one occasion, in trying to enter the vein without an incision, his cannula had passed right through the vein; that in another case he had to make seven punctures before his cannula entered the vein; that the incision could be made quickly and gave rise to little or no pain.

Dr. Benjamin Lee wished to know the size of the cannula used.

Dr. Hunter said that his cannula was silver-plated, and from one-eighteenth to one-twelfth of an inch in diameter, being thus somewhat smaller than the cephalic vein itself; was provided with a stop-cock, and connected with the glass funnel by an India-rubber tube twenty-four inches long and one-sixth of an inch in diameter. In speaking of a remarkable case of the intravenous injection of milk, which occurred

late in the autumn, and in which the milk used was that of a goat, Dr. Hunter said that the effects of the first three injections were remarkable. The patient was very low from hæmorrhage from the bowels, following typhoid fever. When the milk was injected the veins were collapsed, and the patient was entirely unconscious, while in the course of six or twelve hours after the operation the veins had filled out, and he was conscious and intelligent. Dr. Hunter referred to the case of milk-injection for gastric ulcer, reported as performed in May or June of this year, by Dr. Bullard, of the Demilt Dispensary, New York City.

Dr. H. H. Smith wished to inquire if it were not possible that the after-effects of the injection of milk were due simply to the presence of a stimulating liquid in the blood. He instanced the effects following the injection of salt and water in Asiatic cholera.

Dr. Pepper made answer that Dr. Smith's question was one which could not be definitely answered at the present day, and when our knowledge of the subject was so imperfect. He had no doubt that in many cases the milk-injections merely served to tide the system over a period of depression.

Dr. Frederick P. Henry did not at all agree with Dr. Pepper in his division of anæmia into functional and organic. Anæmia, he argued, was always a change in the structure of the blood, hence structural, *i.e.*, organic. With regard to the albuminuria following milk-injection, he wished to call the attention of the Society to the fact that albuminuria always followed the ingestion of a large amount of the white of egg.

Concerning the respiratory difficulty following the intravenous injection of milk, Dr. James C. Wilson called to mind a lecture by Ponfick, in which it was stated that the same symptom was consequent upon diseases in which the hæmoglobin of the blood was destroyed.

Dr. I. Guitères said that where the hæmoglobin of the blood was being destroyed, there was always a species of jaundice present. Here there was none. He thought the dyspnœa entirely mechanical.

Dr. H. H. Smith thought that the dyspnœa was due to the formation of casein in the blood; but, then, Dr. Gaillard Thomas had shown that milk resembled chyle very closely in its constitution.

Dr. C. T. Hunter wished to remark, in closing, that he always considered it necessary to strain the milk, in all cases, before injecting it; and that he thought it dangerous to cleanse the apparatus with carbolic acid before using it, as suggested by some.

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#### BRINTON ON THE INTRAVENOUS INJECTION OF MILK.\*

IN consequence of the great percentage of deaths in general practice from the effects of the transfusion of blood, a new operation has of late years been proposed—that of the intravenous injection of milk. Thus far only about twelve cases where milk was injected into the veins, have been put on record; of these, three were performed by Dr. Edward M. Hodder, of Montreal; two by Dr. Joseph W. Howe, of New York; three by Dr. T. Gaillard Thomas, of New York, and four by Dr. Charles T. Hunter.

The advantages claimed for milk, which show it to be a fluid more fit for intravenous injection than blood, are that there is no danger of coagulation, and

\* *New York Medical Record*, November 2, 1878.

none of the passage of air. Moreover, milk is more allied to chyle, the material of which nature makes blood, than any other fluid with which we are acquainted. We all know that chyle from the *receptaculum chyli* empties directly into the left subclavian vein after passing through the thoracic duct. This chyle, upon its entrance into the blood, is a whitish, oily, milky-looking fluid. Chyle is said by Dr. T. Gaillard Thomas (*The Injection of Milk as a Substitute for the Transfusion of Blood*, 1878) to be not very unlike milk in its composition. "Chyle," says he, "is fat in emulsion in a serous fluid. Milk is fat molecularly, divided and suspended in water with casein and sugar." The objections which have been raised to the use of milk are that "the casein will cause obstructions in the small arteries; and that the emunctories, in endeavouring to eliminate it, will be overwhelmed by congestion". These objections Dr. Thomas answers by showing how nearly similar in their constitution milk and chyle are.

The kind of milk which is generally used is the milk of the cow, although, in a very celebrated case of intravenous injection of milk which occurred recently in this city, the milk injected was that of a goat, which was brought into the pantry of the house where the patient was lying, and milked there. In one of Dr. Joseph W. Howe's cases, also, goat's milk was used. The results thus obtained from the intravenous injection of milk have been moderately good, much better certainly than those obtained in surgical practice thus far by the transfusion of blood. Two of Dr. Hodder's, one of Dr. Howe's, two of Dr. Thomas's, and one of Dr. Hunter's cases were followed by very marked improvement. That is to say, out of the eleven cases in all already published, six have been successful, *i.e.*, have been followed by marked improvement. Indeed, the fact seems to be that, had the injection only been made earlier in those cases where bad results followed, its effects might have been most excellent. In one of Dr. Hunter's cases—one of hæmorrhage from the bowels as a result of typhoid fever—the patient rallied most wonderfully after each operation, and was only carried off at last by a most copious and draining hæmorrhage. In one of Dr. Howe's cases, the milk was carried from such a distance as to be slightly decomposed before injection; hence the fatal result. According to Dr. Thomas, Dr. Eugene Dupuy, of New York, has shown that the intravenous injection of decomposed milk into dogs is uniformly fatal; whereas the same experiment, if practised with perfectly pure and fresh milk, is entirely innocuous. In the other fatal case of Dr. Hunter's—one of Addison's disease—the operation was only attempted as *un dernier ressort*.

Dr. Thomas sums up the results of his operations as follows. 1. The injection of milk in place of blood is perfectly feasible and safe. 2. None but milk removed from a healthy cow within a few minutes of the time of injection should be used. 3. The intravenous injection of milk is infinitely easier than the transfusion of blood. 4. The injection of milk, like the transfusion of blood, is commonly followed by a chill, and a rapid and marked rise of temperature. 5. Not more than eight ounces should be injected at one operation. 6. Lactéal injections should not be limited to cases prostrated by hæmorrhage, but should be employed in disorders which greatly depreciate the blood, such as Asiatic cholera, pernicious anæmia, typhoid fever, etc., and as a substitute for diseased blood in certain affections which imme-

diately call for the free use of the lancet—such as puerperal convulsions, etc.

In performing the operation for the intravenous injection of milk, certain simple forms of apparatus are necessary. Dr. Thomas uses a glass funnel, having attached to it a piece of India-rubber tubing, with a very small cannula in its extremity. The injections were always made into either the median basilic or cephalic vein of the left arm. Dr. Charles T. Hunter, who has performed the operation of transfusion several times, and has recently had the three cases of milk injection to which reference has already been made, uses a form of apparatus slightly different from that of Dr. Thomas. Dr. Hunter, instead of a glass funnel, employs one of brass; his cannula is only from one-twelfth to one-eighth of an inch in diameter, being smaller in calibre than the cephalic vein itself, and is connected with the funnel by means of a piece of India-rubber tubing two feet in length and about one-sixth of an inch in diameter. His cannula is silver-plated, provided with a carefully constructed stop-cock, and ends in a very fine point. Dr. Hunter does not pierce the vein through intervening skin and tissues, but makes an incision about one-half an inch long over the course of the vein, dissects the vein away from the surrounding tissues, raises it on a grooved director, and then plunges the cannula directly into it. He does not consider it necessary to tie the cannula in position, but thinks that it is amply constricted by the wall of the vein.

He always strains the milk before injection. The question has frequently been raised as to whether the effects following the intravenous injection of milk are not due entirely to the presence of a stimulating liquid in the blood and its action on the walls of the heart; whether it can, therefore, be said to do anything more than merely tide the system over a state of marked depression—whether, in fact, the result obtained is any other than that produced in certain cases of epidemic Asiatic cholera by the injection of simple salt and water into the circulating fluid of the body. This is a point which has not yet been definitely settled.

With regard to the evident obstruction to respiration immediately following the injection in many instances, and the presence of marked albuminuria, all that I can say is that the pulmonary obstruction is said by some to be produced by the formation of casein in the arteries of the lungs; and that the albuminuria which follows the transfusion of blood, as well as the intravenous injection of milk, may be produced by the simple ingestion of unusually large quantities of the white of egg.

#### BLACKWELL ON IODISED OILS.

DR. E. P. BLACKWELL (*Philadelphia Medical Times*, and *New Remedies*, September 1878), says: The want of a solution of iodine which shall not precipitate in the stomach, and especially of one which shall be easily miscible with oil, has been long felt. The French chemists, by a tedious process, made a solution in oil of sweet almonds; but it was liable to rancidity, while the large amount of the solvent necessary to be taken with each dose rendered it unacceptable.

The writer of this article, very early in his medical career, had his thoughts turned towards a more complete iodising of cod-liver oil, thinking that the amount of iodine contained in this medicinal agent was too small to exert its full remedial power. Fail-



ing in his efforts to cause direct union, he gave up his attempt, but did not relinquish his idea.

Early in the year 1870, while engaged in pharmaceutical manipulations, he discovered the extreme solubility of iodine in the oil of bitter almonds. He was at that time ignorant of the reference in the *United States Dispensatory* to Zeller, who speaks of this solubility as "slow and partial". His remark seems to have attracted no attention; yet the fact is a most valuable one, opening the way to many combinations of great importance to therapeutists.

On placing together powdered iodine and the oil of bitter almonds, the violet colour of the former is immediately, and with great intensity, imparted to the latter; and if they be allowed to remain in contact for a rather long period—two months or more—they unite in the proportion of one of iodine to three of the oil. This solution mixes freely with oils, fats, glycerin, alcohol, ethers, and fluid extracts of vegetable matter, and is alone a most eligible concentrated preparation for application to parts where a thin fluid is liable to be swept away, as in the throat, the nares, vagina, and uterus, and where, at best, only a small amount can be made to adhere. As the physiological rather than the chemical action is desirable in a topical application of iodine, this preparation merits acceptance, because it leaves the tissue soft and in good condition for absorption.

*Formula for Iodised Oil of Bitter Almonds (containing 25 per cent. of iodine).*—R Pulveris iodinii, ℥i.; olei amygdalæ amaræ, ʒi. (by weight). Mix, and shake occasionally for two months.

This may be combined with many other remedies for external application, to meet many different indications. If the purpose be to induce resolution of swollen glands, soap-liniment may be chosen; if to produce counter-irritation or blistering, cantharidal collodion or croton-oil would be suitable. For general external use, in which an emollient, unstaining, and less concentrated article is desirable, the iodised oil of almonds with glycerine fulfils all the indications, leaving the skin after its application supple and without stain. This is beyond comparison superior to "iodine paint", which corrugates the skin and hinders absorption; or to the greasy, uncleanly ointment.

*Formula for Iodised Glycerin.*—R Iodised oil of bitter almonds, ʒi. = 15 grains of iodine; glycerin, ʒviij. (by weight). M.

This is a most elegant form for external use, and may, properly diluted, be administered internally, in doses of two minims = about  $\frac{1}{16}$  gr. of iodine and  $\frac{1}{4}$  oil of bitter almonds.

The system is said to be best affected by iodine in minute doses and in exceedingly dilute form, as in the natural mineral waters, all excess of the remedy being carried off by the emunctories. To meet this view an iodised water may be made:

R Iodised glycerin, ʒi. (2 grains of iodine); water, F i. M.

This contains about the amount of iodine found in four pints of the water of Iodine Spring, Saratoga, and has about the strength of Lugol's iodine lotion. A tablespoonful, containing about  $\frac{1}{10}$  gr. of iodine and  $\frac{1}{2}$  gr. of oil of bitter almonds, may be taken, diluted at pleasure, for a dose.

It is, however, to the iodising more completely than it exists in nature of cod-liver oil, that the efforts of physicians and pharmacists have been bent—all feeling that the therapeutic value of this remedy would be greatly enhanced by combination with a larger amount of iodine. The discovery of the solu-

bility of the latter substance in oil of bitter almonds removes all the difficulty. We have only to add the iodised oil to the cod-liver oil, and, on agitation, complete and permanent union takes place. I may add, what is well known, that a proprietary article, claiming to be composed of cod-liver oil, iodine, bromine, and phosphorus, has been long before the public, and has received quasi-recognition in the *United States Dispensatory*, and the endorsement of many physicians. This compound is, however, vended at a very high price; its working formula is unknown to the writer, and, he presumes, to the general pharmacist. The profession, therefore, may not be averse to a formula which may be filled by any physician or druggist. The following form I have used for several years in making

*Iodised Cod-liver Oil.*—R Iodised oil of bitter almonds, gr. xvi; cod-liver oil, Oi. Mix and shake. A teaspoonful, containing  $\frac{1}{32}$  gr. of iodine, and  $\frac{1}{10}$  gr. of oil of bitter almonds, may be taken for a dose. If thirty grains of the iodised oil of bitter almonds, two drachms of phosphorated cod-liver oil, and one grain of bromine, be used to the pint of cod-liver oil, the ingredients and proportions of Fougere will be had, plus twenty-four grains of oil of bitter almonds.

Very efficient combinations may be made by uniting the iodised almond-oil with alterative fluid extracts and potassic iodide:

R Potassii iodidi, ʒij; olei amygdalæ iodati, gr. iv; extract stillingie fluidi, ʒiij; syrup helianthem, ʒviiss. M. Dose, a tablespoonful three times a day.

I may add that I have not discovered the influence of bitter-almond oil as a factor in the various prescriptions used by me, except as a soothing remedy. I commend them with great confidence to the profession, believing they will meet with hearty acceptance and be greatly useful.

## LEE ON SUSPENSION AS A MEANS OF TREATING SPINAL DISTORTIONS.

In a monograph extracted from the *Transactions of the American Medical Association*, Dr. Benjamin Lee maintains that efficient extension of the spinal column for relieving diseased vertebrae from pressure, or of overcoming deformity, is impossible by means of any apparatus worn upon the person, and can only be effected by apparatus having a fixed point of support unconnected with the body of the patient, by means of which he is suspended, the weight of the body and limbs forming the extending force. Suspension may be direct—by the head alone; the counter-extending force being exerted by means of a ratchet and key; or by the head and hands, self-suspension, the counter-extending force being exerted by the manual traction of the patient himself. This is effected by an apparatus designed by Dr. Lee, which he calls the spinal swing; and which consists of a simple pulley attached to an iron hook, which may be screwed to a joist in the ceiling or to a wooden frame. Over the pulley passes a rope, having at one end a steel bow bearing a head-sling, and fixed upon the other two wooden ovals about four inches apart, the lower being a little above the patient's head; by these the patient can practise self-suspension with the hands, or a weight may be substituted when the patient's strength will not permit his keeping up suspension long enough. Suspension by

these methods is useful both in angular and lateral curvature of the spine. Dr. Lee considers the condition in vertebral caries to be closely analogous to that existing in an ununited fracture of a long bone, and as first extension, secondly fixation, are the grand desiderata in the one, so should they be in the other. A patient is never too feeble for the careful and judicious application of these principles. Confinement to bed will not prevent the sad results of the disease, for it is not simply the superincumbent weight of the head and trunk which causes the spine to bulge at its weakest point; it is due in part to active muscular contraction. Hence deformity may occur to an excessive degree, even though the patient be kept as far as possible supine, and thus denied the advantages of fresh air and exercise. It is just here that this method of suspension comes in as a most admirable immediate and mediate resource.

Vertical suspension—by the hands alone—the counter-extending force being exerted by the manual traction of the patient upon a bar overhead, is applicable to all cases of lateral, but only to those cases of angular curvature where the disease is below the fourth dorsal vertebra. The apparatus for its performance are the ladder and the trapeze. In using the former for lateral curvature, the hand corresponding to the depressed shoulder should grasp the step above the other one. The trapeze in angular curvature is used simply as a hand-swing, but it does not exert as efficient an extending force directly upon the spinal column in the line of its axis as the spinal swing, and ought not to be substituted for it, although it is a valuable adjuvant. In lateral curvature it can be used in the following way. The bar is suspended four inches above the patient's head, and grasped with both hands. The knees are held stiff, and the feet close together. An assistant, standing behind, places one hand under the axilla corresponding to the depressed shoulder, and with the other makes firm pressure against the convexity of the opposite side.

Oblique suspension—by the hands alone—the counter-extending force being exerted by an assistant, through the medium of a hinged lever, by traction upon the hands of the patient, is employed only in cases of lateral curvature, and requires a special apparatus. It is a powerful means of treatment, but suspension cannot be borne for more than a few seconds.

In horizontal suspension—by the trunk—the counter-extending force is exerted by a leather strap, which supports the side of the thorax of the patient in the horizontal posture. The apparatus for its employment is known as Lonsdale's couch, although it may be used in connection with an ordinary couch or bed, if sufficiently firm. It is especially applicable to lateral, but may also be cautiously employed in angular curvatures. It is a mild form of application of force, and may be continued for an hour or two intermittingly.

E. CARR JACKSON.

#### BALFOUR ON THE STRUCTURE AND DEVELOPMENT OF THE OVARY.

IN the October number of the *Quarterly Journal of Microscopical Science*, Mr. Balfour, of Trinity College, Cambridge, has an elaborate and beautifully illustrated paper "On the Structure and Develop-

ment of the Vertebrate Ovary." The investigations are confined to the ovaries of two types, viz., elasmobranchii and mammalia. Two species of scyllium (stellare and canicula) and raja among the fishes, and the rabbit, cat, dog, and sheep among the mammals, have supplied the materials for examination, while picric and osmic acids are the hardening agents chiefly used. Accurate measurements of the cells are given with some comparative tables, but no scale is given with the drawings, merely a note as to the object-glass and eye-piece used. A scale makes reference and comparison much easier. Full references to the literature of the subject are given, and the value of the paper is much enhanced by the comparison of Mr. Balfour's own observations and views with those of previous authors, which he introduces all through the text.

Those who are interested in the subject, or who wish to have a model for similar work, must read the paper and examine the figures for themselves, as it is impossible to give more than a very brief outline of the general conclusions here.

The relation of the germinal epithelium to the stroma, the connection between *primitive ova* in Waldeyer's sense and the permanent ova; and the homologies of the egg membranes, are the main points dealt with. In the fishes the following conclusions are arrived at.

1. The ovary in the embryo is a ridge, triangular in section, and with a special thickening of the epithelium on its outer side, which is the true germinal epithelium, and to which the ova are confined. At first this germinal epithelium is sharply separated by a membrane from the stroma; but, at about the time when the follicular epithelium begins to form round the ova, the stroma begins to grow in among the epithelium, forming vascular channels, and partially isolating ova and ova-nests. Eventually the stroma becomes differentiated into an external vascular layer, and an internal lymphatic portion. Later, the stroma in-growths form a definite tunic just under the superficial layer of the germinal epithelium. This outer layer of epithelium he calls pseudo-epithelium, and points out that the protoplasm of its cells is prolonged into fibrous processes, which pass into the stroma-tunic.

2. Certain cells in the epithelium lining the dorsal angle of the body cavity become distinguished as *primitive ova*, by the abundance of their protoplasm and their granular nuclei, at a very early period of development, even before the formation of the genital ridges. These *primitive ova* are not to be regarded as true ova, but as parent *sexual cells*. Similar cells in the male give rise to spermatozoa. The permanent ova are larger (as 4 to 3) than the *primitive ova*; they have less protoplasm as compared to their nucleus, and the protoplasm is granular, while the nucleus is clear, with a network of fibres. The *primitive ova* may develop directly into permanent, but more often the permanent ova are formed in nests, due to the coalescence of several *primitive ova*, or to the multiplication by division of the *primitive ova* (Semper). In whichever way the permanent ova are formed, certain regular changes occur in the nuclei which are carefully described. The formation of fresh ova continues till comparatively late in life.

3. The follicular epithelium is derived from the general cells of the germinal epithelium, which arrange themselves round each ovum almost directly after its separation from the nest. They are at first flat, but afterwards become columnar. Various changes in



the follicular epithelium and the arrangement and size of its cells at different stages of its development are accurately described and figured.

4. There are two egg membranes during some period of the growth. The first formed and outer he regards as a produce of the ovum (vitellary membrane) as it is often present before the formation of the follicle. The second membrane (*zona radiata*) is formed from the vitellus, and is within the former. Both the membranes are much reduced as the egg ripens, and when it is laid no trace of them remains.

5. The vitellus, at first faintly granular, afterwards exhibits a very distinct (protoplasmic) network of fibres. The yolk arises in the manner described by Gegenbaur, certain changes in the yolk and the germinal vesicle are then described.

Passing to the mammalian ovary, his observations are chiefly made on the rabbit; but the cat, dog, and sheep are also used. He commences with the embryo at eighteen days, and passes on to examine others at various stages of embryonic life and at successive periods after birth, from two days up to six weeks. The general conclusions are as follows.

In an eighteen days' embryo, the ovary consists of a cylindrical ridge, attached along the inner side of the Wolffian body. It has an outer part two or three cells deep (germinal epithelium), and a hilus (afterwards vascular zone) composed of branched masses of epithelial tissue (tubuliferous tissue) derived from the walls of the anterior Malpighian bodies, and numerous blood-vessels and some stroma cells. The cells of the germinal epithelium give rise to both the permanent ova and the follicular epithelium. These cells remain for long indifferent, however, so that stages are not seen like those in the fishes, etc.

The conversion of the germinal epithelial cells into permanent ova commences in the embryo about the twenty-second day. Certain changes in the nuclei and cells are then described which are almost identical with those in elasmobranchs.

As the indifferent cells, either in nests or singly, develop into permanent ova, certain other cells of the germinal epithelium which have become smaller (by division) arrange themselves round the ova and form the follicular epithelium.

The first membrane (vitelline) arises round the ovum before the appearance of the follicular epithelium. Mr. Balfour concludes by some general observations on the structure and development of the ovary, of which the following appear to be the most important. He selected elasmobranchii and mammalia as types, because what holds good for two such dissimilar forms may be supposed to hold good for all vertebrata except amphioxus.

He regards the whole egg-containing part of the ovary as the *thickened germinal epithelium*, differing from the original germinal epithelial patch in that it is broken up into a kind of mesh-work by in-growths of the stroma. Pflüger's egg-tubes are therefore merely trabeculae of germinal epithelium, and have no such importance as has been attributed to them.

The primitive ova are to be regarded not as ova, but as embryonic sexual cells. The two methods in which they may become permanent have been mentioned above. As to the ova-nests, he rejects Götte's view that the nuclei fuse as well as the cells. The nests he regards rather as feeding the ova-cells than as originating them. In support of this view he refers to what is known of the hydrozoa and some insects. The homologies of the egg-membranes he considers still somewhat obscure; enough has been

already said to give an outline of his views on this part of the subject. The most important point in the whole paper is the confirmation of the views of Ludwig, Semper, and Waldeyer, as to the fact that the follicular epithelium is derived from the germinal epithelial cells, in opposition to the view of Foulis that it is formed from the connective tissue-corpuscles of the stroma. On the correct view as to the derivation of this epithelium, the whole pathology of the ovary rests. For the explanation of minor differences between his views and those of Ludwig, Semper, and Waldeyer, the paper must be referred to.

J. KNOWSLEY THORNTON.

#### ERLENMEYER ON REFLEX VERTIGO DUE TO STRICTURE OF THE URETHRA.

DR. ERLMEYER prefaces his description of this case in the *Deutsche Medicinische Wochenschrift* (Nov. 2 and 9) by discussing the differential diagnosis between vertigo and epilepsy. Two forms at least of reflex vertigo are now distinctly recognised. The first is that due to indigestion; it has been fully described by Trousseau. The second, known as Menière's disease, is caused by certain lesions of the ear. Besides these two forms, many cases of vertigo occur for which no cause can be ascertained. They are often called "essential vertigo", or wrongly characterised as "epileptoid". Vertigo is only to be designated "epileptic" when accompanied by the following symptoms: 1, an aura; 2, either (a) unconscious purposeless movements or speech, or (b) confused ideas during the attack; and 3, an after-stage of mental and physical depression. If all these three symptoms, or two of them, accompany an attack of vertigo, it is certainly epileptic. Cases in which only one of the above conditions accompanies vertigo rarely, if ever, occur.

Fischer has lately described the case of a woman, aged 22, subject to a strong tendency to sleep, which came on in definite attacks. This condition was rightly termed epileptic, as the attacks were preceded by an aura, and accompanied by confused, excited speech. A few more observations are made concerning the three criteria given above.

1. The aura may affect any part of the nervous system, and may consequently be motor, sensory, sensual, or vaso-motor. It may be purely psychic, and make itself evident in depression, excitement, disinclination for work, or in other ways.

2. The unconscious purposeless actions of patients during an attack are well known, also the confused speech, which is often loud, abusive, or desponding. Similar confused thoughts, which do not find utterance, often occur in these cases, and should always be inquired for. The patients usually remember them, though they have generally no recollection of their speech and actions. These ideas often have reference to fighting, fire, murder, and such like, though sometimes they are simply rambling incoherent ideas of a less exciting nature.

3. An after-stage of mental and bodily exhaustion is characteristic of epileptic vertigo. The patient feels unusually tired, falls asleep, and awakes with a headache, or, if he do not sleep, he is irritable, depressed, and disinclined for employment. This condition may persist for days. The author has occasionally seen what he calls a "post-paroxysmal aura", that is, the same symptoms persistent after the attack as constituted the aura before it.

The writer believes that stricture of the urethra has

never before been noted as a cause of vertigo, and relates the following case.

T. L., aged 31, a merchant, unmarried, belonged to a family in which there was no taint of insanity or nervous disease; his parents were not related. Excepting some symptoms of scrofula, he had had no special illnesses. He was of a reserved disposition; led a steady and regular life. Some years ago he had had gonorrhoea, but not syphilis. The joint between the two distal phalanges of the thumb was absent in both hands.

His illness began five or six years ago with a feeling in the left arm of weight and stiffness, which came and went, never lasted very long, and was not accompanied by pain or other abnormal sensations. It felt as if his arm were distended with lead. The left leg soon became similarly affected. If an attack came on while he was walking, he was obliged to stop at once, and lost all command over his leg. Eventually the right arm became also affected; the right leg, however, remained quite free. The symptoms became worse, in that the attacks were more frequent, more severe, and were associated with frontal headache and vertigo. The headache became constant; the vertigo came on with the attacks of stiffness in the extremities. The patient felt as if he had suddenly become drunk, had lost his balance, and must fall. He was unable to move, owing to the stiffness of his left leg. The tendency to fall was generally towards the left side, but the patient never actually fell. He never lost consciousness; neither nausea nor vomiting ever occurred. There was never any aura nor any after-symptoms. The attacks occurred daily under the most various circumstances. The vertigo occurred alone, without stiffness of the limbs, but only during micturition. This process was difficult, owing to a stricture, and it was in the interval, before the urine commenced to flow, that the giddiness was most marked. As soon as the urine began to flow the vertigo ceased. The patient had become nervous, restless, and irritable; sleeplessness and unfitness for mental work supervened. Once he was melancholic, and contemplated suicide. Sexual desire and power were greatly diminished. The patient complained of much pain in the back, and of seeing objects of a red colour. Appetite, digestion, and general nutrition were not impaired.

The patient was first seen by the author in August 1877. He was a well-developed man, possessed of considerable strength, which had in no way diminished during his illness. His speech was fluent; no affection of the cranial nerves could be ascertained. With closed eyes he could neither stand nor walk steadily, but did not fall; he felt giddy. There was no ataxy of the limbs; no pain was caused by percussing the head or spinal column; pressure over the left cervical sympathetic nerve caused pain; the patellar tendon-reflex was markedly increased. The tongue was coated; pressure over the epigastrium caused pain; the bowels were constipated; the urine was clouded; micturition was difficult. No cause of the disease was evident. The patient himself ascribed it to over-work.

The diagnosis was uncertain. Some of the symptoms seemed to point to commencing disease of the cerebellum or of the lateral columns of the cord. The most probable explanation seemed to be that the vertigo was due to indigestion, and the affections of the limbs to commencing sclerosis of the lateral columns. Pills containing nitrate of silver were ordered, with the view of treating both the stomachic catarrh and the spinal disease. Daily sponging with

tepid water, the use of enemata when required for constipation, and the treatment of the stricture by gradual dilatation, were advised. The patient was warned not to take any bath above a temperature of 88° Fahr.

During the following winter the indigestion passed off, but the other symptoms were unimproved; the stricture had not been treated; ergotin was prescribed instead of nitrate of silver. The treatment of the stricture was now undertaken in London. It caused excessive pain at first, but was completely successful. The vertigo at once ceased; the attacks of stiffness in the limbs became less frequent, and soon ceased entirely. No trace of vertigo now accompanied micturition; the headache disappeared gradually, and the patient regained his energy and cheerfulness. Three months later, none of the symptoms had recurred. It appeared that all treatment, except the dilatation of the stricture, had been most imperfectly carried out, as the patient was constantly travelling. The daily sponging was frequently omitted; the ergotin was never taken at all; about thirty grains of nitrate of silver were taken during six months. The author was surprised to find, however, that the subjective giddiness and objective unsteadiness, while standing or walking with closed eyes, were as great as ever. The patellar tendon reflex was also as much increased as when he was first examined. The patient still complains of slight pains in the back, and of being easily fatigued by walking.

Dr. Erlenmeyer thinks that no one can doubt that in this case the reflex vertigo was due to the urethral stricture. The attacks of stiffness, etc., in the limbs still remain unaccounted for. A connection between irritation of the genitals and the innervation of the cerebral vessels is no new observation. The present case shows that in future it will not be superfluous in cases of vertigo to examine the patient for stricture, and to treat the same energetically if one be present.

C. S. W. COBOLD, M.D.

## ROBERT AND KUESSNER ON A CASE OF PERIODIC HÆMOGLOBINURIA.

DRS. ROBERT AND KUESSNER of Halle describe a case in the *Berliner Klinische Wochenschrift* for October 28. The patient is a labourer, aged 32, of a healthy family, with the exception of his father, who died of phthisis. He himself had good health in his youth. In 1871 he had soft chancre and bubo. In the winter of 1873, while at work in the fields on a very cold day, he was suddenly seized with severe formication, quickly followed by a sense of great lassitude, heaviness of limbs, pallor of surface, and cold shivering, and was compelled to leave his work. On his way home, he passed some urine of a dark reddish colour. The next morning, although better, he only with difficulty resumed work. During the same winter he had several more such seizures, and these were associated with some dyspnoea. From that time he lost his energy, and was loth to work; his appetite failed; his skin was pale, and he constantly had a sense of chilliness, with cold extremities. He now obtained medical treatment, and improved, though the feeling of chilliness remained; and, owing to this, he exchanged his field-labour for work in a sugar-refinery. In 1875 he was similarly attacked, and since then these seizures have been tolerably frequent, and much the same as before, the rigors being followed by heat and profuse perspiration, while the urine had a dark coffee colour. Soon



after one of these attacks the skin is of a remarkably brownish-yellow colour, which is even shared by the sclerotics; and they are now accompanied by a severe pain in the chest. He also suffers much and often from severe neuralgia, sometimes of the trunk, sometimes of the extremities, which has been much relieved by cupping. He is warned of an approaching attack by the sense of extreme weight in his limbs. Under these circumstances, he came under observation in the clinic in December 1877. On examination, the heart, lungs, liver, and spleen were normal; there was some tenderness on the left margin of the left quadratus lumborum; the fundus of the eye was normal. The patient has long been a spirit-drinker. Since he was only an out-patient, having refused to enter the clinic, it was impossible to obtain the urine voided during these attacks fresh, but in the end of March 1868 some was brought which was only twelve hours old. It was very dark, almost like black coffee. Its specific gravity was 1.029. It was acid; contained many hyaline cylinders, but not blood-corpuscles or crystals, and therefore no oxalates. On boiling it yielded a large quantity of dark-coloured albumen. In the spectro-scope it gave the spectrum of hæmoglobin. However, five days after this attack, nothing abnormal could be detected in the urine. Again, on the 10th April, he was caught in a shower. Soon the premonitory dragging in his limbs and shivering set in, and in half an hour afterwards the same dark urine was voided, which presented on examination the same characters as just described; but after forty-eight hours all colouring matter and albumen had disappeared, and the urine was quite normal. After this, and while temporarily confined to the house, no further attacks came on. With a view to ascertaining whether it were possible to produce one of these attacks artificially, by the internal use of substances, which are supposed to act as solvents of the red blood-corpuscles, thymol was administered for eight days, and subsequently large doses (half an ounce every hour) of glycerine for two days, without any effect. He was now put on a regular course of the saccharated carbonate of iron; his general condition improved greatly, and there have been no further attacks up to the present time, but he still is under observation.

This is a case of periodic hæmoglobinuria, as described recently by Lichtheim (R. Volkmann's *Sammlung Klinischer Vorträge*, No. 154) and Franz, and agrees in every particular with their account of it. A Dutch author, Van Rossen, writing last year, puts forth the hypothesis that these are in reality cases of hæmaturia, and that in consequence of the abundance of oxalates in the urine, the blood-discs are dissolved and the hæmoglobin set free. But this explanation is clearly not admissible in the present case, for the first dark-coloured urine is voided very shortly after the commencement of a paroxysm, and no oxalates can be discovered in it. Moreover, the brown tinging of the sclerotics indicates an almost saturation of the tissues with serum containing hæmoglobin. Further notice of the case is promised.

W. J. TREUTLER, M.B.

## PATHOLOGY.

LETRILLE ON THE BRAIN IN A CASE OF OLD-STANDING HEMIPLEGIA.—M. Letrille presented a case to the Société Anatomique (*Le Progrès Médical*,

November 16) of a man, aged 49, who had suffered from a right hemiplegia at the age of 13. The hemiplegia came on suddenly, was unaccompanied by aphasia, lasted many months, and it was twenty years before he completely recovered his strength, and the patient stated he always went a little lame. The man died of primary cancer of the liver, not originating from the gall-ducts. On examining the brain, the convolutions on the left side were flatter than on the right, and the cerebral substance was soft and fluctuating; the falx was adherent to the internal surface of the left frontal lobe; on separating the hemispheres a considerable quantity of fluid escaped from the left lateral ventricle, and the cerebral substance collapsed at once. The right hemisphere weighed 540 grammes (about 1 lb. 3.3 oz. avoirdupois), the left 435 grammes (15.3 ounces). The first left internal frontal convolution had disappeared for about 6 centimètres of its length, as had also the greater part of the second, but the paracentral lobe was intact, or at least preserved its shape, although it seemed smaller than the right. The base of the quadrate lobe was the seat of an inconsiderable atrophy. The thickness of the brain at the atrophied patch was about 6 millimètres. The cavity of the left lateral ventricle was considerably enlarged; the subependymal vessels were dilated; there was no other lesion in the cerebro-spinal centres. The cerebral arteries and the cranium were normal.

GOWERS ON THE BRAIN IN CONGENITAL ABSENCE OF ONE HAND.—Dr. W. R. Gowers (*Brain*, October 1878) reports an interesting case, in which the following appearances were found in the brain of a man, aged 40, whose left hand was absent from birth. The two hemispheres of the brain were nearly of the same size; the frontal convolutions were nearly of the same area, but individually somewhat smaller on the right side, although they were more complex, and it seemed probable there was little difference. The ascending frontal convolutions were quite equal. Between the two ascending parietal convolutions a marked difference existed. At their origin at the longitudinal fissure, for the first inch of their extent they were nearly equal in size, and continued nearly equal for the upper inch-and-a-half. In the next (middle) two inches there was a very marked difference, the right being a narrow single convolution, and the left broad and depressed by a slight secondary sulcus. The transverse measurements were, the right .35 inch, the left .65 inch. The lowest extremities were equal in size. There was no disparity in the rest of the parietal or occipital lobes, or in the central ganglia. Microscopical examination of the two ascending parietal convolutions showed very little difference in structure. The author remarks that the diminution in size of the ascending parietal convolution occupies precisely the area, stimulation of which, according to Ferrier, causes movement of the opposite hand.

LEONARD AND HETLING ON CASES OF CEREBELLAR TUMOUR.—Mr. Crosby Leonard (*Transactions of the Bristol Medico-Chirurgical Society*, vol. i) gives the particulars of a case of cerebellar tumour occupying the right side of that organ. The patient, a woman, was twenty-seven years of age, and the symptoms had lasted three months. The chief symptoms were intermittent attacks of severe pain in the head, occasionally followed by vomiting. There was no pyrexia, and no indications of paralysis till the last few weeks of life, when double vision was complained

of. Two or three convulsive attacks occurred, in the last of which she died. The tumour, situated as above, appeared to infiltrate the cerebellar substance. On microscopical examination, it proved to be carcinomatous. There was no evidence of disease in other organs.

In the same volume, Mr. Henry E. Hetling records the following case. E. G., aged 22, single, had about seven months previously complained of vomiting, followed by agonising pain in the head, and constipation. Shortly afterwards she was noticed to stagger in her gait, her sight became dim, she lost flesh and strength, and menstruation ceased—all within a month from her first complaint. Disturbances of vision now commenced; she said the people in the street seemed walking on the tops of the houses. When she came under observation her sight was bad, and three weeks later she had complete amaurosis; there was intense pain in the head, but no vomiting; there was occasional strabismus, and slight convulsive seizures. Her position was curious; her head being tightly flexed on her chest, her knees were tightly flexed on her abdomen, and she rested on the vertex of her head and on her elbows and knees. This position she maintained till within a week of her death.

At the *post mortem* examination the ventricles were found distended with fluid, and a tumour occupied the cerebellum, the structure of which appeared to be destroyed. Its surface was nodulated and hard, the section was creamy, with yellow gray nodules interspersed.

PARROT ON SYPHILOMA OF THE HEART.—M. Parrot (*Le Progrès Médical*, November 16), after referring to the descriptions of this affection by Rosen, Wagner, Virchow, and Coupland, says he saw very well marked syphilitic lesions of the heart in a child which had died at the Maternité Hospital, and in which the lungs also presented the characters of syphilitic pneumonia. The nodules scattered over the surface or in the thickness of the organ greatly resembled those in the lung. Around a central sepia-coloured part the parenchyma had a yellow tint; histological observation showed that these two zones represented the same process, but at different stages; in the yellow peripheral zone the muscular fibres were not altered, but between them were numerous round nuclei very abundantly developed. In the centre these elements were much more abundant, and no longer took on the carmine staining, but had a yellow tint; moreover, the muscle was broken and converted into a refracting substance like myeline. Here and there were only granular fatty heaps in the place of these definite structures. From this, he says, we may fairly conclude that the changes commenced at the centre of the nodule.

SMITH ON SYPHILOMA OF THE HEART.—Dr. Shingleton Smith (*Transactions of the Bristol Medico-Chirurgical Society*, vol. i) has recorded the following condition in the heart of a woman, aged 35, who suddenly fell dead in the street. The greater part of the heart's texture was infiltrated with a morbid growth, but very unequally so. On the surface of the left ventricle pale-coloured nodules were visible, projecting above the surrounding tissue, and extending to a depth of half-an-inch into the substance of the wall. Projecting internally were many other nodules, as large as peas, growing on the muscular columns. The greater portion of the inter-ventricular septum was uniformly infiltrated, being

pale in colour, and containing very little muscular structure. Microscopically, the nodules were found to consist of a fibrous stroma infiltrated with a small celled growth; elsewhere the small-celled growth was found to infiltrate the muscle running in lines between the fibres, and collected into masses here and there. The muscular tissue itself was granular; many of the fibres were wasted, and the intermuscular septa were generally thickened. The adipose tissue on the heart's surface was similarly infiltrated, lines of minute nuclei being seen to run between the cells, and to be grouped here and there in larger masses. No other evidence of syphilis was noticed in the body.

ROBERT SAUNDBY, M.D.

BRUDI ON AN INTERESTING MALFORMATION OF THE FOOT.—In the *Berliner Klinische Wochenschrift*, for August 26, Dr. Brudi gives the following account of a malformation which he observed in the foot of an artilleryman under his care in hospital.

On the great toe of the left foot, in the angle between the inner and posterior borders of the nail, is a tumour of the size of a thumb-nail, attached by a short, thick, scarcely movable pedicle. Half of the swelling extends over the nail, the other half reaches onwards beyond it. It is covered by a somewhat red but normal skin. At the peripheral end an articulation is distinctly recognised, and on closer examination it is seen to represent in miniature a perfectly formed third foot. Not only are there five small toes, but each toe is provided with a distinct nail; those on the first three toes especially are well developed; the fourth and fifth toes are united.

The little foot is a right one. The greatest length, from the pedicle to the point of the great toe, is 17 *millimètres* ( $\frac{9}{10}$ ths of an inch); the length gradually decreases, until at the little toe it is only a few *millimètres*. The first three toes are on the average 4 *millimètres* ( $\frac{1}{4}$ ths of an inch) long; the fourth and fifth are somewhat shorter. The part corresponding to the metatarsus is 15 *millimètres* (0.6 inch) in its greatest width, and passes without sharply defined limit into the very short pedicle, which is 6 *centimètres* wide and 14 in circumference. The whole is moderately movable, and the skin is firm. No trace of bones or joints can be felt.

Whenever the man cuts the nail of his great toe he is obliged to support the small foot, as it would otherwise impede him. He arrived spontaneously at the conclusion "that he must certainly have three feet". The accessory foot gives him no trouble whatever, and does not in the least interfere with the discharge of his duty as a gunner. His upper extremities are perfectly normal. The malformation is congenital, and nothing similar is known to exist in the family.

A. HENRY, M.D.

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## MEDICINE.

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REICH ON THE COMMUNICABILITY OF TUBERCULOSIS.—In a paper in the *Berliner Klinische Wochenschrift* for September 18, Dr. Reich of Mühlheim observes that the opinion is daily gaining ground that tuberculosis is infectious. The following instance, observed by himself at Neuenburg, in the Breisgau, is one in which tuberculosis was communicated to a number of children by a phthisical midwife, directly from mouth to mouth. The only



two midwives practising at Neuenburg—a healthy little town of 1,300 inhabitants in 1875, were R. and S. Of these, the woman S. was undoubtedly the subject of phthisis, with abundant puriform expectoration. In the first case described, Dr. Reich extracted the child by turning. While his attention was engaged with the mother, he noticed that, owing to some difficulty in the child's breathing, the nurse S. sucked the mucus from the infant's mouth, and also endeavoured to promote respiration by blowing into its mouth. For the first three weeks the child progressed well, but then its health failed, and within three months of its birth it died of well marked tubercular meningitis, initiated by symptoms of bronchial catarrh. In May and June following two more children died of the same disease. These three cases had been attended by the nurse S. Dr. Reich's attention being thus attracted, he found, on investigation, that between the 4th April 1875, and the 10th May, 1876, seven children, in addition to the above three, had died (all within the first year) of tubercular meningitis, although in no case was there any history of hereditary tuberculosis; that all these cases had been attended by the woman S., while of all the cases attended by the other midwife, R., not one had died of this disease, nor had any manifested in any way indications of any tubercular form of disease. The duration of the illness varied from eight days to three weeks; whereas, of the ninety-two children who died in their first year during the nine years from 1866 to 1874, only two died of tubercular meningitis; and, similarly, among the twelve infants who died in 1877, there was only one such case, and its parents were tuberculous. The midwife S. herself died of phthisis in July 1876. It was ascertained that S. had been frequently in the habit of sucking the mucus from the mouth of infants, and also of caressing and kissing them. We are thus furnished with valuable hints on the manner of conducting experiments as to the communication of tubercle by inhalation or inoculation. 1. The experiments should be made on young or newly born animals. 2. The animals should be subjected only once or twice to as direct and energetic an inhalation of the poison as possible, after which they should be well fed and cared for. 3. The vehicle of the poison should be the fresh contents of tubercular lung-caverns, if direct inhalation from mouth to mouth be impracticable.

**PENZOLDT ON A VARIETY OF EPIDEMIC PAROTITIS (MUMPS).**—Dr. Penzoldt of Erlangen communicates to the *Deutsche Medicinische Wochenschrift* for October 19 a notice of a variety of epidemic mumps. The usual variations in mumps consist in an exaggeration of the disorder, or in its transfer to other localities. Milder forms, however, in which the principal symptoms are but very slightly developed or replaced by other and less constant ones, seem to have been but rarely noted. In the case of a boy, Sch., aged eight years, who came under observation on the 14th May last, there were, besides elevated temperature (103.1°, 103.3° F.), swelling of both submaxillary glands, and redness and slight swelling of the tonsils, and the next day a very slight and scarcely observable swelling of the left parotid. By the 18th all these symptoms had disappeared. As there was no existence of mumps in Erlangen at the time, this case was no more than suspected. But on the 23rd there occurred in the same town a case of undoubted mumps in a child who attended the same school as Sch., and had actually

sat in the same class with him on the 14th. Soon afterwards there cropped up several more cases, and in some of these the submaxillary swelling was quite as prominent as that of the parotid, and in one case it was even greater. In another case there was high temperature (104.3° F.) with considerable swelling of both submaxillary glands, without any increase whatever in the parotid. In another instance, the disease began in a child with febrile symptoms, followed by marked swelling of the submaxillary glands, while the parotids were but very slightly affected. But subsequently all the children in the same family fell ill with genuine and well pronounced parotitis. These cases therefore show that mumps may be localised, principally in the submaxillary gland—a fact overlooked in many modern text-books. It may be observed also that these variations occurred in the commencement of the epidemic, which is analogous to what happens in many other infectious diseases, where the greatest abnormalities occur at the beginning, and sometimes also at the end of the epidemic.

**KOENIG ON THE OPERATION FOR EMPYEMA.**—Dr. Koenig describes (*Berliner Klinische Wochenschrift*, October 28) a case of empyema on the left side, in which he removed two litres (three and a half pints) of fluid by opening the thorax and pleural cavity. The case was of nine months' standing, and there was lateral curvature of the spine to the right, so that the ribs on the affected left side were closely approximated, thus rendering it necessary to remove a portion of the rib. After the removal of the pus, the cavity was washed out with a tepid solution of salicylic acid, and this was facilitated by somewhat raising the patient repeatedly by the legs (the opening had been made on the side at the sixth rib). The wound was treated antiseptically by Lister's bandage, drainage-tube, etc., but no carbolic acid was used, and the case terminated in complete recovery. W. J. TREUTLER, M.B.

**HABRAN ON UNILATERAL SWEATING OF THE FACE AND NECK.**—Dr. J. Habran relates the following case in *L'Union Médicale du Nord-Est* for October 1878.

N., aged 34, with no previous ill health, and of a healthy family, had never suffered from facial neuralgia; he had several decayed teeth in the upper jaw on both sides; he had never had any discharge or dental abscess. For three years he had noticed that the right side of his face easily perspired; and this perspiration, at first slight, had become more profuse each year. The right side of his face was constantly the seat of uneasiness and of heat, occurring in successive attacks, and intermittingly. This heat was increased in stormy weather, and twenty-four hours before storms it became very distressing, and was accompanied by profuse sweating of the right side of the face, the scalp, and the neck, up to the middle line exactly. This sweating was independent of fatigue or of efforts; and if at the time the patient made any exertion, the left side of the head and the rest of the body remained free from moisture. According to the patient, perspiration had always been very rare and difficult with him, even when fatigued. Now, even in winter, in squally wet weather, in high west winds, the sweating appeared on the right side, disappearing in dry weather, in frosts, and during the prevalence of the north wind. Violent emotions suppressed the secretion; and at his first visit, although the atmospheric conditions

should have favoured sweating by the above account, it was absent, which the patient explained by his emotion. Five days later, in stormy weather, the right side of the face, the neck, and the head was the seat of a very profuse perspiration. The drops of sweat were precisely limited by the median line, both before and behind. The secretion ceased at the level of the clavicle and scapula; it did not reach the shoulder; the rest of the body was free from moisture. In the morning the patient was generally free from sweat; the attack came on towards 3 or 4 p.m., with a sensation of tension and heat in the face, and profuse perspiration. It lasted all night, and in the morning his pillow was wet if he slept on the right side. The right side of the face was found to be decidedly swollen; the features were more marked, the wrinkles deeper; there was no deviation. The cheek sank, the upper lip was very thick up to the middle line; the lower lip and chin were in the same state. The lower eyelid was equally very large, but the upper lid did not seem altered. The skin of the forehead had apparently suffered little, in spite of the abundant sweating; the two sides were alike. There was nothing particular in the nose or nostrils. The beard, recently shaved, was equal on the two sides. The colour of the right cheek was deeper than that of the left—a difference which became more marked at the time when the secretion took place; the skin was thin, soft, and reddish in patches. The temperature was obviously increased on the right side; this could easily be ascertained by the touch; it was not estimated by the thermometer. Sensibility was equal on the two sides; vision was normal. He suffered frequently from coryza, affecting both nostrils equally. He had not had epistaxis. Taste was perfect. The tongue presented no apparent lesion. The hair was healthy and equally grown on both sides. The other functions, digestion, etc., were normal. He was ordered at first eight centigrammes (about one and a quarter grains) of quinine every three hours for three days without any benefit. He was then prescribed pills, containing a milligramme (one-sixtieth of a grain) of sulphate of atropine, and a lotion of corrosive sublimate (1 in 1,000) to the cheek.

The patient did not return for three months, as he found himself better. He passed through the summer without being inconvenienced. He never had the sensation and heat in the cheek, and he only felt threatenings of an attack when he had indulged too freely in drink. There was no trembling of the tongue or fingers. The swelling of the face had entirely disappeared, and the colour of the two sides was equal. The temperature and moisture of the two sides were the same, although the weather was rainy and squally, which formerly was difficult for him to bear.

The author appends a translation of an account of a remarkable case of unilateral sweating, which appeared in the *Virginia Medical Monthly*, by Dr. Merewether Lewis. This case was one of intermittent fever, in which the paroxysms were characterised by a prolonged sweating stage, and the sweat was limited to the right side of the body, and never passed the middle line. The temperature of the two sides was also unequal, on one occasion being 104 F. in the right axilla and 100 $\frac{1}{2}$  F. in the left axilla. On another occasion it was 100 F. in the right and 98 $\frac{1}{2}$  F. in the left axilla. This case also was cured by adding sulphate of atropine to the quinine with which he was being treated.

ROBERT SAUNDBY, M.D.

CHARCOT ON THE DIFFERENTIAL DIAGNOSIS BETWEEN TRUE EPILEPSY AND HYSTERO-EPILEPSY.—M. Charcot (*Gazette des Hôpitaux*, 1878, No. 49) says that true epilepsy develops itself, after only a short aura, in the form of tonic and clonic spasms accompanied by marked stertor. The convulsive stage of the hysterical paroxysm is preceded, after an aura lasting one, two, or even several days, by a peculiar, prolonged cry; this is followed by violent, purposeless, fantastic movements, clonic spasms, and great psychic excitement, perhaps even delirium; but none of these symptoms are accompanied by the slightest sign of stertor.

CHARLES S. W. COBBOLD, M.D.

MADER ON RHEUMATISM OF THE DIAPHRAGM.—Dr. Mader, in the yearly report of the Rudolf Institution in Vienna (*Allgemeine Wiener Medizinische Zeitung*, November 5) remarks that the diagnosis of a rheumatic or neuralgic affection of the diaphragm is evidently more a matter of inference than of certain evidence. Yet from time to time cases come under observation, which scarcely admit any other explanation. In the present instance, the patient was a powerful muscular butcher, twenty-seven years of age, who was attacked one morning with very severe pain, extending from the scrobiculus cordis to the back, and greatly impeding respiration. The breathing was quick, short, and superficial; purely thoracic. Movements of the abdominal walls, indicating contraction of the diaphragm, were almost entirely absent. There was much turgor of the face, but no marked febrile symptoms. Nothing abnormal was found on examining the chest. A subcutaneous injection of morphia in the epigastrium was followed by a cessation of pain and by sleep. Next morning the patient was free from all difficulty of breathing, but he complained of pain in the right scapular region. This also was relieved by injection of morphia, and the patient was discharged cured on the third day.

A. HENRY, M.D.

DOWSE ON SYPHILITIC EPILEPSY.—Dr. T. S. Dowse, in the *Practitioner* for October 1878, gives a summary of his observations upon two hundred and seventy-four cases of epileptiform seizures of an undoubted syphilitic origin. As the result of acquired syphilis, Dr. Dowse believes epilepsy to be extremely rare, but, in its hereditary form, producing, as it appears to do, an unstable and defective evolution of the nervous centres, to a degree far beyond any other agency, primary idiopathic epilepsies are more due to hereditary syphilis than to any other causes. Acquired syphilis does not predispose a stable brain and nervous system to attacks of epilepsy, *petit mal*, or epileptoid seizures, unless under two conditions—namely, first from absolute organic change in the nervous substance (vessels included), and, secondly, where albuminoid syphilis has so impaired the vasomotor centres and vascular functions of repletion, exchange, and repair, that blood becomes not only attenuated, but loaded with effete products. Acquired syphilis has, in some cases, actually relieved unstable brains during the secondary stages, and for some years subsequently from the epileptogenous tendency, which, however, has returned with tenfold violence in later years. In other cases, a patient suffering from acquired syphilis sustains an injury to the head and becomes epileptic, whereas, had he not been syphilitised, this would not have occurred. Dr. Dowse has met with several similar cases, in which, moreover, the epileptic habit has become confirmed, and been



transmitted to the offspring. In diagnosing syphilitic epilepsy we must first consider the two classes of epileptics—the one where the mind between the seizures is unaffected, as in such cases as Cæsar, Napoleon, and many others, and where there is more or less mental derangement between the attacks. It is to the latter class of cases that syphilitic epilepsies essentially belong. Should a man or woman be attacked with epilepsy between thirty and forty years of age, without any hereditary predisposition or a previous seizure, then a syphilitic origin may be suspected. If between the attacks there be more or less mental derangement, the diagnosis is simplified, and still more so if there be a paresis more or less profound, localised or unilateral, but gradually passing off after the epileptiform seizure. The reflex processes are rarely, if ever, completely absent. The iris may contract under the influence of a strong light; the lids close when the conjunctiva is tickled, and a state of subconsciousness rather than of profound coma is a prominent feature from first to last. The stages of the attack are all ill-defined and merge the one into the other. Rarely is there the general tonic spasm with thotonism. Pallor rather than cyanosis is the facial exponent, and the fit is prolonged often many hours, with intervals of wandering, delirium, and excitement. Foaming at the mouth is less common than a profuse flow of saliva, and all sorts of cries are associated with the seizure; but rarely, as Romberg expresses it, “Shrill and terrifying to man and beast.”

As to albumen in the urine, it is present in but few cases; but epileptoid seizures, associated with albuminoid syphilis and a plentiful secretion of phosphatic albuminous urine, are not uncommon.

[Several valuable contributions have been made to this subject during the last few years in the pages of the various medical journals, references to which, up to the end of 1876, may be obtained by turning to the *Medical Digest*, section 1307-5; since then, Dr. Dreschfeld, *Lancet*, February 1877, p. 269; an able editorial review on Jacksonian epilepsy, *Lancet*, August 1877, p. 171; and Dr. Ferrier, *Medical Times and Gazette*, April 1878, p. 456, have added to the literature of the subject.—*Rep.*]

ARCHER ON A CASE OF PARALYSIS OF THE TRIFACIAL NERVE.—Mr. Robert Samuel Archer, in the *British Medical Journal*, October 1878, p. 514, gives an exhaustive report of a case of paralysis of both portions of the trigeminal nerve, uncomplicated with other nervous or cerebral symptoms. As all observers testify to the extreme rarity of complete paralysis of both sensory and motor roots of the nerve, the case is well worthy of notice.

Catherine C., a tailoress, aged 37, was admitted to the West Derby Hospital on March 5, 1878. She had small-pox as a child. When about twenty-three years of age, her nose was injured by a blow. Four years later, another injury occurred to the left parietal region. For six or seven weeks her left eye had been bad. Seven days before being seen she was suddenly seized with giddiness and numbness, with loss of sensation down the left side of the face. There was no history of syphilis, but a suspicion that it had existed. She had had one or two attacks of acute rheumatism. The skin was loose, flabby, and anæmic. The face was pitted with marks of small-pox. On the left side it was fixed and mask-like. There was depression of the left angle of the mouth. All the organs were healthy. The intelligence was good, but she complained of giddiness, and she staggered

a little in her gait. She had occasional pain in the left occipital region. There was anæsthesia of the left side of the face, and of the scalp, as far back as a line drawn across the top of the head from ear to ear. The area of anæsthesia was accurately bounded by the middle line, from the vertex to the top of the chin, and by the horizontal ramus of the jaw; in the space, bounded in front by a line running from the malar prominence downwards, and backwards to the neighbourhood of the angle of the jaw, above by the zygoma, and posteriorly by the ear, the anæsthesia was not so absolute. The left nostril was insensible to impressions; there was also a more profuse and offensive discharge than from the right side. The left conjunctiva and cornea could be touched with impunity, being quite insensible, as was also the palpebral mucous membrane, which was much injected. Vessels crossed the cornea, and there was in its lower segment a small superficial ulcer; its upper part was quite opaque. On April 17 the ulceration had invaded the whole extent of the cornea. The mucous membranes of the upper and lower lips and of the inside of the cheeks and gums were quite insensible to impressions. On April 17 there were abrasions over these parts. The left side of the tongue, the palate, and velum palati were anæsthetic; hearing was greatly impaired on the left side. The left eye could not be closed as tightly as the right, possibly owing to loss of sensation rather than of muscular power. Mastication was impaired on the left side, she feeling as though she had “no hold on her teeth” on that side. The muscles on the left side, which are supplied by the motor branch, fell quite flaccid and inactive, as compared with those on the right. The lower jaw moved laterally to its normal extent, but could not be moved forwards to the right at all, showing paralysis of the left pterygoid muscles. Saliva and fluids trickled unconsciously from the left angle of the mouth. The patient greatly improved under treatment with iodide of potassium and hospital care, but left before being fully restored to health, so that the case could not be watched to its close.

SIMPSON AND PHILIPSON ON THE TREATMENT OF AORTIC ANEURISM.—At the annual meeting of the British Medical Association in August 1877, Dr. Henry Simpson of Manchester read a paper upon the above subject, which is published in the *British Medical Journal*, March 9, 1878. The conclusions at which Dr. Simpson arrives are the following. Rest must be absolute, the tedium being relieved by all the ingenuity at one's command. Mr. Tufnell, who has written much upon the subject of rest, attributes more value to this means than Dr. Simpson would feel inclined to do. As regarded diet, Dr. Simpson followed the rules laid down by Mr. Tufnell, both as regards solids and fluids as nearly as possible. Iodide of potassium is the drug that has acquired the greatest amount of popularity, and this was pushed up to two scruples thrice a day. The value of ice and of galvano-puncture is fully discussed, and from the latter plan there are fair grounds for hope that it will become more successful in the future, as already valuable results have been secured by its use in the past. In all Dr. Simpson's cases life had been prolonged; in four, what might be called a cure was effected.

In the same journal, Dr. Philipson gives two cases of abdominal aneurism.

CASE I. Robert K., aged 26, was admitted into the Newcastle-on-Tyne Infirmary on June 8, 1876,

with well marked abdominal aneurism. He was ordered recumbency and iodide of potassium. There was no history of syphilis. On July 29 no pulsation was visible or perceptible, and no murmur. On August 12 he was allowed to leave his bed, continuing the iodide of potassium. He left October 7, and was seen in good health December 20, 1876.

CASE II. John H., aged 25, was admitted October 28, 1876, with aneurism of the abdominal aorta just above the bifurcation. There was a history of gonorrhœa, not of syphilis. He was put upon iodide of potassium with rest until December 2, when, pulsation still continuing, although slighter, Lister's abdominal tourniquet was applied for half an hour. Pulsation returned on its removal. On December 5 the tourniquet was again applied for three quarters of an hour with the same result. On December 8, after pressure for one hour and a half, the same result ensued. This was at 10 P.M. At 1 A.M. on December 9 the patient complained of pain in the abdomen, and passed blood *per anum*. At 11 A.M. the patient was still restless and in pain; the pulsations of the tumour appeared more marked. On December 10 pulsation ceased in the tumour, and the extremities became cold; the femoral arteries were not pulsating. On December 13 the tumour was as hard as a cricket-ball; no pulsation was visible or perceptible to the hand. On February 1, 1877, the patient left to return home, undoubtedly cured. The conclusion deducible from this case and others is that aneurismal tumours of the lower parts of the abdominal aorta may be successfully treated by pressure on the cardiac side of the aneurism; but that this method is dangerous, and should not be employed until other measures have failed, and that if pressure be employed, it should be moderate and prolonged, rather than complete and of short duration.

BROOKHOUSE ON AORTIC ANEURISM, TREATED BY IODIDE OF POTASSIUM, LOW DIET, AND ABSOLUTE REST.—Dr. Brookhouse (*Lancet* of February 23, 1878) gives the history of two cases.

CASE I. J. C., æt. 38, was admitted January 31, 1877, having been ailing for two years. On admission, there were well marked physical signs of aortic aneurism, no history of syphilis. Ten grains of iodide of potassium three times a day were ordered, and increased to fifteen grains on February 9, with absolute rest in bed and low diet. On June 24 the tumour had almost disappeared, and he was generally much improved, but on July 5, being suddenly startled out of sleep, he ejected a pint of arterial blood. Being disheartened, he left July 30, and died choked six weeks afterwards.

CASE II. T. B., æt. 44, ill eighteen months, was admitted May 29, 1877, with symptoms of aortic aneurism well marked. The treatment was the same as in Case I, with the addition of tincture of digitalis. On September 4 the swelling was smaller and firmer; the bruit was inaudible. He was made out-patient December 18, 1877. The tumour was then barely perceptible. Pulsation was evident to touch, not distensible; there was no bruit. His general health was good. He expressed himself as feeling quite well.

CREED ON A CASE OF INTRACARDIAC THROMBOSIS.—Dr. Thomas Creed, in the *Lancet*, October 1878, p. 506, gives the history of a case which was diagnosed as one of decided intracardiac thrombosis. A lady, aged 33, was delivered of her fifth child on the 29th May 1873. She progressed well until the

fifth day, when she was allowed to dress and recline on the bed; and, contrary to advice, put her feet to the ground for a short time. On the same evening, her cook excited her, and the next morning Dr. Creed found the pulse weak and intermittent. There was no cardiac murmur, nor pain, nor dyspnoea, but there was considerable uterine tenderness, and tolerably free, bright hæmorrhage. Turpentine fomentations with bark and ammonia in five-grain doses, following Dr. Richardson's advice in such cases, were prescribed. On the seventh day the symptoms continued the same and the ammonia was increased to ten grains every four hours. On the eighth day, Dr. Robert Lee saw the patient and approved of the treatment, but doubted the diagnosis. On the fifteenth day, dyspnoea and weight over the cardiac region were complained of; the heart's action had become rapid and irregular; the pulse intermitting every third beat, with increased cardiac dulness on the right side. This increase of symptoms was evidently due to the attempts the patient had made to sit up in bed. Absolute recumbency for a fortnight so improved the symptoms that she was carried to a sofa in a large drawing room and advised to keep recumbent for several months. On the 23rd June her bad symptoms returned. She complained of great restlessness, and inability to lie in any one position. There was a sense of fluttering, as though the heart would stop, and its action was weak and rapid, resembling the foetal heart. The face became somewhat dusky and livid, and the external jugulars distended.

Dr. Walshe, who now saw the case, confirmed Dr. Creed's diagnosis. After several months' quiet and recumbency she was removed to St. Leonard's, and returned home restored in health; and has since given birth to a child without any untoward symptoms. The heart's action remains weak, without any murmur being perceptible.

ON THE OCCURRENCE OF ENTERIC FEVER IN ADVANCED LIFE.—In the *Lancet*, September 1878, p. 426, a correspondent asked whether typhoid had been known to occur at the age of seventy years and upwards. In reply to this question, at pages 463, 534, several cases are recorded where the disease manifested itself in patients varying from seventy to ninety years of age. The accuracy of the diagnosis being guaranteed in some of the cases by such observers as Drs. Wilks and Clifford Allbutt, leaves no room for doubt that, in exceptional cases, typhoid may be met with in elderly persons.

Mr. Kiernander, at page 499, expresses his surprise that any one can conceive it possible that a patient should have enteric fever after he has passed the age of susceptibility; in other words, when he has lived so long as to have nothing of Peyer's patches left in him. "The thing is physically impossible," and if such cases as those recently reported really crop up, Mr. Kiernander thinks it time to frame a sounder pathology for enteric fever than we now possess. Forty is the time of life when Peyer's patches begin to degenerate, and enteric fever cannot touch the advanced in years, because these glands are absent, hence, "it is not within the range of the possible for an old man, say between seventy-two and seventy-six, to suffer from true typhoid fever."

RICHARD NEALE, M.D.

HANOT ON ORCHITIS IN TYPHOID FEVER.—Dr. V. Hanot (*Archives Générales de Médecine*, November 1878, p. 595) gives an account of a case of orchitis, which occurred during the course of an



attack of typhoid in a patient under the care of Dr. Lasègue, in La Pitié Hospital.

The man, æt. 21, was admitted on August 19th, 1878, suffering from typhoid. On August 25th (the sixteenth day of the fever) the patient complained of violent pain in the right groin and testicle, which had come on during the preceding night, and had prevented sleep. On examination, the scrotum was seen to be slightly tense and reddened; the right testis somewhat swollen, harder than the left, and painful on pressure; the epididymis was intact and painless, and the cord unaffected. There was no fluid in the tunica vaginalis. None of the ordinary causes of orchitis could be made out. On August 26th the testis was as before, but the pain was less. On the 27th the testis had slightly diminished in size, and the scrotum had become normal. On September 3rd all traces of the orchitis had disappeared. On the 14th the patient was convalescent from typhoid fever, but the right testis had manifestly decreased in volume.

Some particulars of three other cases of affection of the testis and epididymis during typhoid are also given by Dr. Hanot. These cases occurred in the Hôpital Cochin, under the care of Dr. Bucquoy, in 1872 and 1873. ARTHUR COOPER.

PROUST AND JOFFROY ON MYELITIS.—Messrs. Proust and Joffroy drew the following conclusions (*Revue Mensuelle*, April 8 1878) from a case which they observed, in which acute myelitis began with an apoplectiform attack, and also from some cases selected from books. 1. Acute myelitis often begins suddenly. Formerly this was called a primary "hæmatomyélie". This has not been confirmed, however, in the more recent observations, so that apoplectiform paraplegia must be classed with myelitis. 2. The fall which sometimes occurs as the first symptom of apoplectiform myelitis might be mistaken for the cause, whereas it only represents the first striking indication of the disease. 3. The changes in the constituent elements of the spinal cord consist chiefly of hypertrophy of the axis-cylinder, and of hypertrophy, with subsequent atrophy and granular pigmentation of the nerve-cells. The very considerable increase of the intercellular substance of the grey matter is little marked near the inflamed parts in the white substance, consequently the form of myelitis is as much interstitial as parenchymatous.

MADER ON TWO CASES OF VASCULAR NEUROSIS.—These cases are illustrated by Dr. Mader in the *Wiener Med. Presse*, 1878, No. 23, 24 (abstract in *Centralblatt für die Medicinischen Wissenschaften*, November 9). The patient, a locksmith, aged 43, had suffered from his childhood from swellings, which appeared periodically at fortnightly intervals in different parts of the body. Sometimes a whole extremity was affected, at other times only certain portions of the body, e.g., the neck or scrotum. The patient was never feverish; he did not suffer pain. The only symptoms were as follows. The skin was turgid, red, and infiltrated, and there was much œdema of both hands and fingers. The swellings appeared, and disappeared in the course of about half an hour. The attacks could not be traced to any particular cause, but there existed a curious and intimate relation between them and peculiar attacks of colic, to which the patient was subject. These attacks were particularly painful whenever swellings did not appear. They generally were accompanied by diarrhoea and vomiting. If the swellings were marked and disappeared slowly, the patient did not

suffer much from colic. Some of his relatives were affected in a similar way. The author explains this curious phenomenon as being caused by a spasmodic affection of the arterioles.

The other case is a similar one. The patient, a student, aged 19, subject to palpitation of the heart, suddenly experienced a feeling of heat, which seemed to originate in the head, and to spread thence over the whole body. The skin was red and œdematous over the whole body, especially on the eyelids and the neck. The mucous membrane of the pharynx was in the same condition. The pulse was much quickened. The patient took a few spoonfuls of infusion of digitalis, and in about two hours the redness of the skin had disappeared, and diuresis was marked. The patient felt very weak and exhausted. The author explains this case by a paresis of the vagus nerve.

FAIRFAX ON RENAL ASTHMA.—Dr. Fairfax (*Virginia Medical Monthly*, July) reports the following case. A woman, who was at the time nursing a child about two months old, suffered for several days from severe pain in the back of the neck, which was aggravated by sudden movements of the head, but was not attended by fever or headache. She was suddenly seized during the night with an attack of dyspnoea, and on the following morning Dr. Fairfax found her sitting up in bed, with an anxious and livid countenance, and breathing like a person with a severe attack of asthma. On examination, he discovered no signs of heart-disease, and found that the air had free access to both lungs, with the exception of the infrascapular regions, where there was slight fine crepitation. He noticed some œdema of the hands and face, however; and, on examining the urine, found that it contained albumen casts, epithelium, and blood-corpuscles; it was very scanty, and had a specific gravity of only 1.013. Concurrently with the establishment of free action of the kidneys and skin, which was effected in two or three days, the respiration became easy and natural, and the pain in the neck and the œdema diminished.

DA COSTA ON A CASE OF HYSTERICAL HÆMOPTYSIS.—At a recent clinic in the Pennsylvania Hospital, Dr. da Costa (*Medical and Surgical Reporter*, July 13th) presented a woman with the hysterical diathesis, who had suffered from cough at various periods, but particularly during the preceding six months, and had had repeated pulmonary hæmorrhages, on one occasion raising, it is stated, nearly a pint of blood. There was some consolidation without softening at the right apex, but otherwise the lungs were normal. Dr. da Costa believed the case to be one of hysterical hæmoptysis, basing his diagnosis on the presence of the hysterical diathesis, the irregularity of the menses, the even temperature record, and the absence of expectoration, except at the time of the bleeding. The consolidation at the right apex was, in his opinion, of inflammatory origin, and he confidently expected that it would disappear under treatment by chalybeates, good food, rest, and blisters.

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## SURGERY.

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THIRY ON THE CAUSES AND TREATMENT OF PHAGEDÆNA.—In the *Presse Médicale Belge*, Nov. 10, 1878, Professor Thiry's views on chancreous phaga-

dæna are referred to in connection with the report of a case lately under his care in the Hôpital Saint-Pierre. Thiry considers that phagedæna is not due to any particular constitutional state, nor is it related to gangrene. It is purely local, and results from increased activity of the virus accidentally set up during the evolutions of the sore. This increased activity is, according to Thiry, due to one or other of the following three causes, viz.: 1. More or less intense inflammation of the base and periphery of the chancre; 2. Exaggerative sensibility of the chancre; 3. A torpid state of, or want of vitality in, the chancre. The varieties of phagedæna are accordingly arranged as follows:—1. Phagedæna from excess of inflammation; 2. Phagedæna from excess of sensibility; 3. Torpid or atonic phagedæna. The gravity of the case will depend upon the extent to which either of the three causes is in operation.

The treatment recommended differs somewhat according to the nature of the sore. While methodical cauterisation is necessary in all, the subsequent dressing in the first form should consist in soothing fomentations and regular compression; in the second, or irritable variety, preparations of opium or morphine should be applied, combined with gentle pressure; in the third, or atonic form, a solution of tartrate of iron is most useful.

As a caustic, Thiry speaks very highly of an ointment compound of 2 grammes (30 grains) of cyanide of mercury to 10 grammes (150 grains) of lard.

A male, aged 25, was admitted into Saint-Pierre on June 17, 1878, with a spreading phagedenic chancre of the atonic variety. The sore had been in existence for four months; it commenced at the frænum, and on admission had perforated and almost wholly destroyed the prepuce. There was no syphilitic induration. The treatment consisted in deep cauterisation of the whole ulcer on eight consecutive days, and the application of a solution of tartrate of iron four times daily. The penis was bandaged and kept up on the abdomen. After eight days, the aspect of the ulcer was almost that of a simple sore. The healing process soon became general, and the patient was discharged from the hospital cured, at the end of July.

ARTHUR COOPER.

TRÉLAT ON CYSTS ON THE SPERMATIC CORD.—In *Le Progrès Médical* (Nov. 23) M. Trélat relates a case of cysts in the spermatic cord, occurring in his practice at the Hôpital de la Charité. The patient was a lad aged 14; upon examination, a multiple tumour was detected along the course of the cord unconnected with the testicle, and in the inguinal canal was a swelling which was diagnosed at first to be a hernia, but which was afterwards found to be a cyst of the same nature as those lower down. All the cysts were tapped and the patient apparently recovered, but he soon returned to the hospital with a recurrence, all the cysts having refilled. The two varieties of cysts of the cord are: firstly, those devised from the remains of the Wolffian body, which are connected to the testicle and epididymis; and secondly, those which arise from the vagino-peritoneal canal remaining more or less patent. The tumour under consideration belonged to the latter class, and this diagnosis was confirmed by the characters of the fluid drawn off from the cyst, which contained no spermatozoa nor crystals, and was not coagulable. The treatment of the recurrence was tapping and injection of iodine.

E. COTTERELL.

PAULY ON THE TREATMENT OF GANGLION.—A case is reported (*Berliner Klinische Wochenschrift*, No. 34, 1878) by Dr. J. Pauly, of Posen, of a young woman aged 19, who had a hard tense bursal swelling of the size of a cherry, situated in front of the right wrist and over the lower end of the radius. This growth had existed for one year, was increasing in size, and impairing more and more the use of the hand. The ether-spray having been applied, and the extremity rendered bloodless, an incision was made over and into the tumour; and, after the viscid fluid contents had been discharged, the thick cyst-wall was dissected away. In the course of the operation, a communication was discovered between the interior of the ganglion and a sheath of a tendon. The operation was performed under antiseptic conditions, and the wound was dressed and drained according to Lister's method. The radical operation on ganglion, the author states, was, with former methods of treating wounds, extremely risky. The pedicle of the ganglion is sometimes hollow, and the interior of the sac, in such case, may communicate either with the neighbouring joint or with the sheath of a tendon. The presence of such communication, which favours Gosselin's view, that a ganglion consists in the enlargement and distension of a pre-existing detached sac of synovial membrane, accounts for the painful, violent, and spreading inflammation and suppuration consequent on free incision, which often leads to permanent rigidity of the joint, and, according to Hyrtl, may even have a fatal termination. The earliest subcutaneous operations were performed by Richter on these forms of bursal swelling.

Thanks to the antiseptic method, according to Dr. Pauly, it is immaterial to the surgeon whether the ganglion communicate or not with a joint or synovial sheath, since with the application of such method the tumour may be incised and extirpated without danger. Constriction of the seat of operation, after Esmarch's plan, not only prevents any hæmorrhage during the use of the knife, but also enables the surgeon to recognise distinctly the parts under dissection, and favours very much the action of the ether-spray in producing absolute local anæsthesia.

W. JOHNSON SMITH.

PARKER AND THOMAS ON DISEASES OF THE HIP, KNEE, AND ANKLE-JOINTS.—In some introductory remarks prefixed to the third edition of Mr. H. O. Thomas's work on the above affections, Mr. Rushton Parker summarises the teaching contained in the volume. He considers it under three aspects—1. Partly confirmatory of traditional opinion; 2. Partly antagonistic to prevailing doctrine; 3. Partly undoubtedly new.

Under the first heading the question of rest is dealt with, and the necessity of its being *complete* is specially insisted on. It is shown that the conceptions of rest generally formed amongst surgeons are very variable, and some incisive remarks as to the inconsistent views held by many, and especially Professor Sayre, of New York, upon this question are indulged in.

Under the second heading he draws attention to three points deserving mention.

1. The limits which are supposed to be required to the employment of rest.

2. The position here assigned to what is known as passive motion, and the causes and prevention of stiffness and ankylosis.

3. The discussion of counter-irritants, or what may be better called artificial inflammation (?).



In the treatment of these three points there is no lack of novelty, especially of the last, the remarks upon which may be briefly described as revolutionary; possibly not on that account to be deprecated, but certainly to be regarded with extreme caution until a wider experience has justified them.

Under the third heading, "the chief novelty of the book, the recognition of resolution", is pointed out, and shown, we think, to be a point calling for close attention. With the few concluding words upon the practice of "excision" (of bone) which is in the book repudiated in favour of "incision of the soft parts", most of those, we think, who have had an opportunity of following the latter line of practice in suitable cases will be in thorough accord.

ARTHUR E. BARKER.

CARADEC ON FRACTURE OF THE CRANIUM, WITH DEPRESSION OF THE LEFT PARIETAL BONE.—Dr. Louis Caradec relates the following case in the *Gazette Hebdom. de Méd. et de Chir.*, October 25, 1878.

The patient, a woman aged 25, was struck on the head by a stone. She immediately became unconscious, and remained so for two hours. Her medical attendant found her suffering from shock. Her breathing was embarrassed, her pulse weak, skin cold, pupils dilated. The tongue was directed to the right, and the right arm and face were paralysed. She was also aphasic. The next day she was feverish, and had headache. On the fourth day a subcutaneous abscess at the place of injury was evacuated, and on the ninth day the wound had healed.

Seventeen days after the accident the patient was brought to M. Caradec. On examination he found a cicatrix, 5 centimètres in length, at the antero-inferior part of the left parietal bone. Its position would correspond internally with the fissure of Rolando and the ascending frontal and parietal convolutions. In the line of the cicatrix, there was a cup-shaped depression of the cranial wall. The walk of the patient was natural. She slept well and ate well. Her tongue was put out straight. The pupils were equal, contractile, and of normal size. She had a stupid appearance. Her powers of memory and intellect were enfeebled, and her speech embarrassed, indeed she could not speak a few words without stammering, and she was often temporarily aphasic. There was marked paresis of the right side of the face, and whenever the facial muscles were put into play, slight muscular contractions were observed on this side, especially in the region of the labial commissure. The right shoulder was unaffected, but there was emaciation of the right arm, fore-arm, and hand; their temperature was lowered, and their sensibility and motility impaired. There was a difference of temperature between the right and left arms of about 5° cent., the right arm being 27° to 29° cent. (80.6° to 84.2° Fahr.) while the left was 32° to 34° (89.6 to 91.2 Fahr.). The prick of a pin was not felt in the right forearm or hand. The right arm could be moved, but the grasping power of the hand was diminished, and could not be long sustained. Caradec attributes the symptoms to fracture of the left parietal and frontal bones, with lesion of the upper parts of the left ascending frontal and parietal convolutions, and cites this case in support of the view that the motor centres of the upper extremity are in the upper two-thirds of the ascending convolutions. The absence of more pronounced aphasia and facial paralysis, he thinks, is due to the fact that the lower parts of the ascending convolu-

tions were little injured. The case was one in which trepanning should have been resorted to at an early period.

Eighteen months after the accident, the aphasia and facial paralysis had completely disappeared. The brachial paralysis could still be observed, but was very slight. The middle, ring, and little finger were more paralysed than the thumb and index finger.

W. J. DODDS, M.B., D.Sc.

TERRILLON ON A BULLET WOUND OF THE SKULL.—At a meeting of the *Société de Chirurgie* (Oct. 16), M. Terrillon read a paper on a case of osseous fistula following the penetration of the skull by a revolver ball. The fistula was situated behind the external auditory meatus, and gave rise to a purulent discharge. There were no cerebral complications, but complete deafness existed on the injured side. An examination revealed the presence of the projectile at a depth of nearly half-an-inch, not counting the thickness of the integuments. Extraction was attempted, but the ball was so firmly fixed that merely a few particles of lead were brought away. The skull was trephined and the bullet then easily extracted with forceps; merely two or three millimètres of the internal table of the skull separated the foreign body from the cranial cavity. The patient so far is well; but M. Terrillon had not yet read a single observation with regard to these lesions of the skull caused by projectiles, that had not terminated fatally. This takes place more or less slowly; sometimes, more than a year after the penetration, cerebral symptoms show the selves, such as meningitis, phlebitis of the sinus, hæmorrhage, abscess of the cerebrum or cerebellum.

HERMANN ON LIGATURE OF THE COMMON CAROTID IN ULCERATION OF THE INTERNAL CAROTID ARTERY.—At the meeting of the Surgical Society of Paris on October 9, M. Hermann (of Mulhouse) read a paper on ligature of the common carotid in cases of ulceration of the internal carotid. A patient with abscess of the tonsil had suddenly profuse hæmorrhage. Happening to be in hospital at the time of the accident, M. Hermann was able, in spite of great swelling in the neck, to apply a ligature to the main artery. The patient recovered. M. Hermann considered that phlegmon of the tonsil could bring about ulceration of the large vessels; the internal carotid was more often affected, yet he cited observations where the bleeding came from the branches of the external carotid. In a great number of cases, ulceration of the wall of the artery was favoured by a bad state of health, or by an increase in the blood-supply, yet his case proved that it was not always so, as the phlegmon of the tonsil was the only cause of ulceration of the carotid. In these cases it was better to tie the common artery, as it was difficult to know the exact source of the bleeding, whether from the external or the internal carotid.

M. Tillaux thought it was very desirable to establish a correct diagnosis, as, if the blood came from the external carotid, ligature of the common artery would not stop the hæmorrhage, as the anastomoses of the internal carotid would re-establish the circulation. A large supply of blood did not suffice as an argument, for under the influence of inflammation the vessels of the tonsil were largely developed.

BOYDT ON CARBOLISM IN BURNS.—Dr. Paul Boydt has observed (*Bulletin Général de Thérapeutique*, Oct. 15), in the service of M. Verneuil, the happy effects obtained by the surgeon in treating ex-

tensive burns with carbolic acid. From the cases he has himself seen, and from those which Busch of Bonn has made known, Dr. Boydt has arrived at the following conclusions. 1. This plan of treatment moderates the inflammation which accompanies the elimination of the eschars. 2. Certain formidable complications, such as acute septicaemia, purulent infection, etc., are prevented. 3. The suppuration is diminished. 4. As concluded by Dr. Busch, those parts only are eliminated which have been destroyed by the heat, and the cicatrix is admirably smooth and extensible.

**SAINT-GERMAIN AND OTHERS ON THE THERMO-CAUTERY IN TRACHEOTOMY.**—At a meeting of the Surgical Society in Paris, October 9th, M. de Saint-Germain opened a discussion on the employment of the thermo-cautery in tracheotomy. He had assisted M. Krishaber at five operations performed by the aid of this instrument, and he should not hesitate himself to use the cautery if called upon to open the trachea. In the first case there was free hæmorrhage, but it was arrested by sponges only; in the second very little blood was lost, and the wound was large. In the three other cases the wound was nearly linear. Ligatures had not been required, as the bleeding could be arrested by touching the vessels with the point of the instrument.

M. Anger stated that he was hastily summoned in the winter to a tracheotomy case at the Hospital Beaujon. M. Barthélémy, the interne, operated. The thermo-cautery was employed until the trachea was reached, and there was no inconvenience from bleeding. The wind-pipe was opened with a bistoury, but a clot of blood then appeared. M. Anger suspected that the posterior wall of the trachea had been incised with the knife. The necropsy on the following day demonstrated the truth of this hypothesis.

**TRUDEAU ON THE USE OF THE CAUTERY IN DIFFUSED PHLEGMON.**—Dr. Paul Trudeau (*Bulletin Général de Thérapeutique*, October 15) thinks highly of the effects produced by the hot iron in the treatment of diffused phlegmon. This practice consists in making a number of deep incisions in the affected parts by means of a cautery used at a red heat. He enunciates the following. 1. The red hot iron may be widely used in the treatment of phlegmon; and the safety of a patient should never be despaired of until this therapeutic agent has been employed. 2. The application of the cautery is generally followed by a diminution of all the grave symptoms. The pain and fever diminish very rapidly, and the case is ordinarily complete. T. F. CHAVASSE, M.D.

**MARTIN ON THE INDIA-RUBBER BANDAGE FOR ULCERS AND OTHER DISEASES OF THE LEGS.**—Dr. Henry A. Martin, of Boston (*British Medical Journal*, October 1878, p. 624) enters very fully into the merits and mode of applying an India-rubber bandage, which he has found invaluable in a variety of diseases of the lower extremities; such as, injuries of the joints, especially of the knee and ankle; synovitis, acute and chronic; diseased bursæ; sprain, etc.; in œdema of the legs, and also of the arm, in that extremely painful form due to cancer of the breast. In varicose veins it effects an absolute cure. In the œdema of pregnancy and in phlebitis and phlegmasia dolens, in cellulitis of the leg and thigh, the effect of the bandage is in every way admirable. In eczema of the legs its value is unequalled. The best Para India-rubber is to be used in lengths vary-

ing to extent of surface required to be covered. It is to be applied next the skin, without any dressing whatever, one turn overlapping its predecessor, and so hermetically sealing the surface. The bandage should be applied in the morning, before the patient has been for any length of time on foot; it is best to apply it before rising. At bedtime the limb, as well as the bandage, will be found bathed in moisture. The leg should be wiped dry, and if there be an ulcerated surface, this is to be dressed with oiled linen rag. The bandage itself is to be rinsed in clean or carbolic water, and hung up to dry, ready for morning use; when, before applying it, the leg is to be freed from all oily matter, and made perfectly clean. In a few days after wearing the bandage, pimples, that run on to pustules (obstructed follicles), appear in greater or less numbers, leaving the skin in a perfectly healthy and unobstructed condition. After ten days or a fortnight the skin becomes highly sensitive, due to maceration and removal of all old and effete matter; this explains why such diseases as eczema improve so rapidly under the treatment. Dr. Martin attributes the results that follow the use of his bandage to the following causes: 1. The firm and constant pressure supporting the vessels; 2. The exclusion of air; 3. The warm moisture due to confined perspiration; 4. The pressure causing absorption of thickened edges of ulcers.

**CALLENDER ON TREATMENT OF ULCERS AND VARICOSE VEINS BY MARTIN'S STRONG ELASTIC BANDAGE.**—Mr. George W. Callender, in the *Lancet*, October 1878, p. 503, speaks in highly commendatory terms of the use of these bandages in ulcers of the leg, especially when they are due to varicose veins. The bandage should be applied before the patient rises in the morning, so that the veins of the leg are undistended.

[In the *Medical Times and Gazette*, March 1851, p. 286, is a diagram showing how Mr. Startin applied with great advantage a spiral elastic bandage cut out of No. 36 vulcanised India-rubber sheeting, in strips three-quarters of an inch in width. Many cases are given in this paper in which the patients lauded the coolness and comfort of this simple arrangement, deriving greater support than from the more expensive elastic stockings. A paper by Mr. Houghton in the *British Medical Journal*, January 1862, entered fully into the value of flannel as a bandage in cases which previously were viewed with horror and dismay, yet were now found to be managed without difficulty, and with almost a certainty of a speedy cure, and this without confinement, or without the least necessity for the patient relinquishing his usual occupation. Dr. Spender (*Lancet*, May 1873, p. 624) also speaks highly of the value of "domette flannel" employed as an elastic bandage. Mr. Gay, in the *Lancet*, January 1868, p. 48, is reported to have stated that spiral elastic bandages for varicose ulcers were a fallacy, being supposed to supply the place of valves that had become inert by disease. Now in the first place, varicose veins as a rule do not possess valves, and in those veins where they do exist, they do not interrupt the current as do the elastic bandages.—*Rep.*]

**HUTCHINSON ON SUPRAPUBIC LITHOTOMY.**—At a meeting of the Clinical Society (*vide Lancet*, October 1878, p. 549), Mr. Hutchinson brought forward the only case of suprapubic lithotomy that had come under his personal care, in which a man, aged



26, began, six months before admission to the hospital, to suffer from frequent and painful micturition and hæmaturia. On sounding, a very large stone was felt in a very irritable and inflamed bladder. On consultation with Messrs. Curling and Lake, it was decided to remove it by the high incision. No great difficulty occurred during the operation, but to effectually drain the bladder was found impossible, the urine welling over the edge of the wound. At the end of a week the patient died pyæmic. At the *post mortem* examination, the bladder was found contracted and rigid from a lining of a thick deposit of phosphates. The ureters were dilated, and there was suppurative nephritis, with pyæmic deposits in liver and lungs. In the discussion that followed, Mr. Hulke did not think it necessary to drain the bladder, as no injury arose from the urine welling over the wound, except personal discomfort to the patient.

[In June 1855 the late Dr. Marshall Hall forwarded to the Institute of France a proposal to substitute lithotomy for lithotomy and lithotripsy. A trocar, passed suprapubically, was allowed to remain in the bladder until adhesive inflammation took place; the small aperture was subsequently dilated until large enough for the passage of the stone. M. Valette in 1858 suggested opening the bladder in the hypogastric region by means of caustics, and published a long essay in support of his views. Dr. George Bell of Edinburgh at the same time claimed both Dr. Marshall Hall's and M. Valette's operations as having been practised by his father in 1837 (*vide Lancet*, vol. ii, 1858, pp. 402, 642, 663).—*Rep.*]

**HOWSE ON TRACHEOTOMY IN IMPENDING DEATH FROM CHLOROFORM INHALATION.**—Mr. Howse, while operating upon a man, aged 36, for urethral disease, on October 18 (*British Medical Journal*, October 1878, p. 642), was obliged to open the larynx with a knife and hold the edges of the wound open with forceps, at a moment's notice, to save life, when death was imminent from sudden arrest of breathing while he was under the influence of chloroform. Much blood entered the bronchi from the largely congested vessels, which, however, was later on coughed up, and the man perfectly recovered. Four days afterwards, the tracheal wound being still open, the man was placed under the influence of ether, with the result of producing similar spasm of the glottis. After the ether took full effect, the spasm passed off, and the operation was successfully performed. This is the second case within two years where a similar operation has been performed by the same surgeon, in order to avoid death from chloroform asphyxiation.

**LAWSON ON A PROBABLE CAUSE OF THE DIMINUTION OF CHIMNEY-SWEEPS' CANCER.**—Mr. George Lawson, in the *Lancet*, October 1878, p. 576, details two cases of this disease that originated in the inguinal glands, both of which terminated fatally, owing to the disease spreading to adjacent arterial trunks. In the course of his remarks, Mr. Lawson explains the present unfrequency of the disease by the fact that soot is now of little commercial value, whereas in former times it was so precious as to repay for the labour of having it carefully sifted to free it from foreign bodies. In the process of sifting, the man held the sieve in a stooping posture, and swayed it from side to side and backwards and forwards. This being very hard work, especially in hot weather, caused chafing of the part of the body most exposed

to such action, viz., the scrotum, which, bedewed with sweat, and rubbing against coarse and soot-begrimed clothes, frequently became the seat of epithelioma.

**BATTAMS ON FRACTURE OF THE CORONOID PROCESS, WITH DISLOCATION OF THE ULNA BACKWARDS.**—Mr. J. Scott Battams diagnosed a case of this rare accident in the receiving-room of the Royal Free Hospital, and gives details of the examination and symptoms in the *Lancet* of October 1878, p. 607. When first seen there was no dislocation, the man having slipped off the kerb-stone and struck his elbow. Flexion and extension, supination, and rotation, were all more or less capable of performance. Accidentally, the man who was holding his injured arm with the other hand, let it fall, and immediately the ulna was dislocated backwards.

[In the *Medical Times and Gazette*, April 1866, p. 410, Mr. Jonathan Hutchinson, speaking of the above accident says, "I have never had an opportunity for dissecting a recent specimen of fracture of the coronoid process, nor have I ever, with any great confidence, diagnosed this injury in a living patient. It is, I think, a plausible conjecture that in many of the examples of dislocation backwards at the elbow, so frequent in children, the cartilaginous extremity of the coronoid process is broken off. It would be impossible to diagnose such a condition of things, since no crepitus would be produced."—*Rep.*]

RICHARD NEALE, M.D.

**HEYDENREICH ON FRACTURES OF THE TIBIA.**—M. Heydenreich (*Thèse de Paris*, and *Gazette Hebdomadaire*, July 12, 1878), divides fractures of the upper extremity of the tibia into those of the upper third, below the anterior tuberosity, and fractures of the upper extremity properly so-called. 1. Fractures of the upper third diminish in frequency as they approach the articulation; they are transverse or oblique, and are generally accompanied by fracture of the fibula. The cause is most frequently direct violence, although they have been caused by a fall on the heel; fractures caused by indirect violence are generally near the anterior tuberosity. There are swelling and considerable ecchymosis, due to the abundance of extravasated blood; effusion into the knee-joint often takes place; displacement may not occur. The prognosis is grave, because of the liability to gangrene; union takes place very slowly (three to four months), probably because of the blood extravasated between the fractured ends. The limb should be extended; when there is not much displacement, slight flexion is preferable, being less likely to produce stiffness of the knee, which may follow the treatment. 2. Fractures of the upper extremity of the tibia comprise (a) separation of the superior epiphysis; (b) separation of the anterior tuberosity, the most frequent cause of which is contraction of the triceps femoris; (c) fracture of one of the condyles; (d) fracture of the entire extremity of the bone. This last form presents several varieties, according to the extent of the fracture, the position and the number of the fragments. The fibula is often intact. Fractures of the entire lower extremity are rare; they may occur at any age; they are caused by direct violence or by falls on the feet. The prognosis is grave; they may be confounded with contusion, sprain, dislocation of the tibia, or fracture of the femur. These are the principal conclusions of this thesis, which, to be so complete, must have cost the author much laborious work.

**VERNEUIL ON THE TREATMENT OF PERINEAL ABSCESS.**—M. Verneuil describes his treatment for certain abscesses at the margin of the anus. There are two distinct varieties of these abscesses; they both occupy the ischio-rectal fossa, but the one variety points towards the buttock, and tends to open externally, whilst the other destroys the circumrectal cellular tissue and tends to open into the rectum. In the first class of cases a simple incision made in the direction of the anus is sufficient; healing takes place rapidly without leaving a fistula. When the wall of the rectum has been laid bare, however, this treatment would be almost surely followed by a fistula. This happened in many cases which have come under M. Verneuil's notice. He quotes one, that of a strong, healthy man, who had a circumrectal abscess which opened of itself. M. Verneuil afterwards merely enlarged the opening, to allow a free escape of pus. Two months later a fistula was developed, and was operated on, the patient being altogether for three months in the hospital.

During the last few years M. Verneuil has combined the two operations. He opens the abscess by an incision, then introduces a ground probe, perforates the wall of the rectum at the highest point at which it is laid bare, and divides all the tissue between the two openings by means of the thermal cautery. He has done this many times without a bad result. When the two operations are done at different times, recovery takes place much more slowly. In a case of large prostatic abscess treated in this way, the cure was complete in thirty days, with the exception of a small superficial wound. The only objection which could be made to this mode of treatment is that it is rather more serious, and takes longer time than a simple incision; but then the cure is much more speedy and more certain.

**VIERLING ON SYPHILIS OF THE TRACHEA AND BRONCHI.**—Herr A. Vierling (*Deutsch. Archiv für Klin. Med.*, 1878, Band iv. No. 21) brings forward the case of a man, aged 44, who died from the effects of tracheal stenosis six years after syphilitic infection. On *post mortem* examination, a deep-seated ulceration was found to extend from about the middle of the trachea to the tertiary divisions of the bronchi; the cartilages were exposed, the mucous membrane infiltrated, and the cicatrices were contracted. The inferior lobes of the lung showed no signs of pneumonia, but they had a peculiar whitish appearance; they were empty of air, compact, and heavier than normal. Herr Vierling made a comprehensive selection of similar cases (45), and found that the larynx was affected in the majority of them, and that the bronchial mucous membrane alone was more rarely attacked. The symptoms are at first insignificant, but still the prognosis is bad, and therefore the author counsels early antisymphilitic treatment in cases of prolonged tracheal and bronchial catarrh, where specific disease is suspected. Deep-seated stenosis cannot be removed, and in these cases tracheotomy generally only hastens the end.

**MAUREL ON THE USE OF SULPHURET OF CARBON IN DRESSING WOUNDS.**—M. Maurel read a paper at the meeting of the Société de Thérapeutique on June 12 (*Gazette Hebdomadaire*) on the employment of sulphuret of carbon in dressing wounds. He says that a solution of gutta-percha in sulphuret of carbon may be of service in exceptional cases.

One serious inconvenience, however, arises from the fact that after several dressings, excoriations are produced around the wound. This always limits the use of it, especially in dressing erysipelatous wounds. During his long residence in Guiana, M. Maurel never observed that the sulphuret of carbon had any marked action on ulcers of a bad nature. He found that compresses steeped in a solution of gutta-percha do not become rigid enough to be used as an immovable apparatus.

**ZAMBONI ON ELECTRO-PUNCTURE IN HYDROCELE.**—F. Zamboni (*Giornale Veneto di Scienze Med.*) performed electro-puncture for five minutes at a time at two sittings, in a case of hydrocele. By the second day the effusion had disappeared. Ten days later it reappeared; but one more puncture caused it to disappear permanently. Zamboni thinks that the electricity gives tone to the vessels and stimulates their absorbent power.

## DISEASES OF CHILDREN.

**ELLIOTT AND MACCALL ON ULCERATION OF THE FRÆNUM LINGUÆ IN PERTUSSIS.**—Drs. Elliott and Maccall, in the *British Medical Journal*, September 1878, pp. 356, 437, draw attention to the frequency with which an ulcer on the frænum linguæ attends whooping-cough. Dr. Elliott believes the origin of the ulcer is follicular, Dr. Maccall, that it is due to mechanical injury of the part against the teeth. Dr. Thomas Morton, who read a paper on the subject before the Harveian Society in 1876, had met with it in thirty-three cases out of eighty-one. Dr. Elliott found it present in twenty-eight cases out of one hundred and twelve, Dr. Maccall in one hundred and eleven out of two hundred and fifty-two. It will here be seen that it is far from being, as Bouchet considered it, a pathognomonic sign of the disease.

**LIVEING ON MOLLUSCUM CONTAGIOSUM.**—Dr. Robert Liveing reports, in the *Lancet*, October 1878, p. 494, nine cases of this disease occurring coincidentally in a school. In November last year one child was attacked, soon after Christmas; before the first child had recovered, several others were attacked, and, later on, others became affected; nine in all becoming victims to the disease.

[Dr. Fancourt Barnes, in the *British Medical Journal*, March 1878, p. 335, gives notes of a family attending the St. George's and St. James's Dispensary, in which an infant, aged three months, the mother, and sister, aged seven, were subjects of true molluscum contagiosum. The sister, aged seven, was first attacked; she gave it to the baby, and the baby gave it to its mother. The father next caught the disease, having two tubercles under his left eye, and, lastly, the brother caught it while playing with the baby.—*Rep.*]

**CHAMBERS ON IMPACTED FÆCES IN THE RECTUM OF A CHILD.**—Dr. Thomas Chambers reports in the *Lancet*, October 1878, p. 540, an instructive case of a child aged 11, where diarrhoea, persisting for three months, was attended and caused by so vast an impaction of fæces as to break down or absorb the triangular cushion which constitutes the perinæum, the recto-vaginal septum being reduced to a mere membrane. After breaking up the mass with spoon and fingers, the bowels were thoroughly emptied, by



the aid of castor-oil; and very quickly all bad symptoms passed away, and the child soon regained her health. The local mischief might, Dr. Chambers remarks, lead in similar cases to a difficult medico-legal question, the appearance almost suggesting the possibility of mechanical injury from other causes.

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POMPER ON OXYURIS VERMICULARIS.—The following observations on the migrations of oxyuris vermicularis in the human body were made by Dr. Pomper (*Diss. Berlin*, 1878, and *Centralblatt für die Med. Wiss.*) on a girl, aged 10. She complained almost every evening of a disagreeable sensation in the pharynx, which was presently followed by pricking on the tongue. The cause of this proved to be a large number of these worms in the mouth, which first appeared on the root of the tongue and then gradually moved on towards its point. They were all females. The author tries to explain this curious occurrence, by supposing that the worms migrated from the rectum into the stomach and thence into the cesophagus and mouth.

## MATERIA MEDICA AND THERAPEUTICS.

FOTHERGILL ON THE TREATMENT OF EARLY PHTHISIS.—Dr. J. Milner Fothergill, in the *Practitioner* for September 1878, discusses this important subject. The leading characteristics of early phthisis are cough, emaciation, night-sweats, and pyrexia, with more or less hæmoptysis, each symptom indicating an appropriate line of treatment. The most important indication is to arrest the night-sweats, and next to attend to the assimilative organs. If the night-sweats be not checked, the blood-salts drain out as soon as supplied. To arrest them there is no anhydrotic to compare with belladonna and its alkaloid atropia. Sulphate of atropia, in doses varying from a seventy-fifth to a twenty-fifth of a grain, is the best form in which to administer the drug. Marked dryness of the throat must be present before the effects of the drug become evident. Usually the first effects of restraining the night-sweats is to promote the appetite and digestion; and so long as hidrosis goes on it is useless to pour in milk, phosphates, or meat-juice; it is like pouring them through a sieve. Night-sweats come on generally in the deep morning-sleep; if awake, the patient does not suffer, while, on the other hand, profuse night-sweats commonly follow an opiate, given to relieve the cough. Sweating largely depends upon the relations existing between the pulmonary and cutaneous respiration, relations much more pronounced in human beings than is commonly supposed. When the respiratory centre is depressed in deep sleep, the sudoriferous glands are thrown into action, the blood being insufficiently aerated, and exciting their sensory nerves, and so producing cutaneous respiration or sweating. Belladonna is a direct stimulant to the respiratory centre, and so, by stimulating this portion of the nervous system, does away with the necessity of hidrosis; hence it is well always to combine belladonna with morphia, when this latter drug is absolutely needed to relieve the cough of phthisis. Where belladonna fails, which is extremely rare, then oxide of zinc with henbane, or sulphate of copper with opium,

is useful. Bathing with vinegar is also extremely valuable. An irregular practitioner in New York gained a great reputation by sponging with hot vinegar and capsicum powder. However attained, the first thing to be done is to arrest the night-sweats; and hot vinegar with cayenne pepper is useful in obstinate cases. Next in importance, the *primæ viæ* demand attention. It is more important to study the tongue in phthisis than the stethoscopic sounds. With a loaded tongue iron and cod-oil are wasted. Calomel with colocynth at bedtime, and a mineral acid with gentian or cinchona during the day, till the tongue cleans, are demanded. If the tongue be glazed, bismuth, with soda-water and milk, is indicated. Drains of all kinds are to be attended to. That from the skin has been disposed of; now comes diarrhœa, and this should be energetically combated, phthical cases being soon depressed. In the early stage, half a grain of sulphate of copper, with one of opium, will often check it. Rice-water should be the beverage, avoiding beef-tea, which often sets up or keeps up a loose state of the bowels, owing to the excrementitious matter it contains. Leucorrhœa demands great attention; many cases hang on month after month unrelieved by treatment, because leucorrhœa or menorrhagia is unchecked. As regards hæmoptysis, we all know that this is not an uncommon end of a case of phthisis, yet in early stages it is often of great curative value, relieving local congestion, and being the starting point of recovery. When the stage of softening has been reached, then hæmoptysis becomes grave. At times a large pulmonary vessel is cut open, or an aneurismal dilatation of a pulmonary artery may burst into a cavity. Slight hæmoptysis in early apical consolidation is frequently arrested by a purgative. When cold hands and feet co-exist with hæmoptysis, warmth applied to the extremities, by relaxing the vessels, relieves the pulmonary congestion. The all-importance of pure air and good food are forcibly insisted upon. As regards the cough, hydrobromic acid with spirits of chloroform forms a better sedative than an opiate.

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PEYRAUD ON CHLORAL AS A LOCAL REVULSIVE.—Dr. Peyraud describes the local action of chloral in an article in the *Bulletin de Thérapeutique*. In the case of a patient to whom he applied chloral on cotton-wool to the temple for the relief of neuralgia, a burn of the third degree was formed in thirty or forty minutes. Dr. Peyraud then mixed chloral with gum-tragacanth, spread it on paper, and applied it to his own arm. In twelve hours a blister was formed, without any pain: the same result was found in several patients to whom the chloralised paper was applied. The absence of pain depends upon the chloral being mixed as above, if applied in powder; strewed on plaster or cotton-wool, it produces painful burning. The blister does not rise until the chloral plaster has been removed for an hour or more.

Dr. Peyraud also observed evidence that the chloral was absorbed by the skin. After the application, several of the patients fell into a deep sleep; and the same occurred to Dr. Peyraud himself when the surface to which the chloral was applied was external. This hypnotic effect often precedes the revulsive action. The blisters are less distinct the more concentrated the application is; the vesication is less constant than that produced by cantharides. The suppuration lasts about five or seven days. Dr. Peyraud recommends the chloral paper as a mild and painless application.

**YVON ON CHLORAL PLASTER.**—M. Yvon (*Bulletin de Therapeutique*) has taken advantage of the fluidifying effect of camphor on chloral-hydrate, to make a plaster, the formula for which is as follows:—Chloral, 5 grammes; camphor, 15 centigrammes; gum-tragacanth, 20 centigrammes; glycerin, 2 or 3 drops; starch, 5 or 2½ grammes. This, when applied to the dry skin, produces a blister in twelve hours; but, after the escape of the serum, a superficial eschar is formed. If the skin were slightly moistened before the application, a burning sensation was produced in a short time, and an eschar like that of a burn was formed. Yvon contends that chloral-hydrate may act as an irritant, but that it is very uncertain and difficult to control. On the other hand, he recommends as a good local irritant a mixture of 15 grammes (232 grains) of chloral, 59 centimètres (7½ grains) of camphor, one gramme (15½ grains) of chloral-hydrate, and 2 or 3 drops of water.

**BETTELHEIM ON A NEW TREATMENT OF TAPEWORM.**—Dr. C. Bettelheim recommends (*Deutsches Archiv für Klin. Med.*, Band xxii, 1878) the following method of treating tænia, which has also been, independently of him, proposed by Dr. Eisenschitz. He says that it is almost certain of success, and that its action is rapid. The method consists in pouring into the stomach through a tube from half-a-pint to a pint of a very strong decoction of pomegranate root: the patient having previously fasted for twenty-four hours, and his bowels having been cleared—preferably by castor-oil. The inconvenience produced by introducing the œsophageal tube is of short duration, and is more than compensated by the rapidity of the cure. Dr. Bettelheim gives six successful cases in which seven worms were discharged within periods varying from three-quarters of an hour to two hours. Three were specimens of *tænia mediocanellata*; four of *tænia solium*.

**ZEISSL ON THE ACTION OF IODOFORM.**—Dr. Zeissl relates (*Wiener Medizinische Wochenschrift*, No. 21, 1878) his experience of the remarkably favourable results of the use of iodoform in venereal sores. He uses a powder for sprinkling the part, consisting of 7 centigrammes (little more than a grain) of iodoform in 5 grammes (75 grains) of sugar of milk. For internal use, he employs the following formula:—iodoform, 1½ gramme (22 grains); white sugar, 3 grammes (45 grains); to be divided into twenty powders, of which one is taken thrice daily. He recommends this especially in the neuralgic affections of syphilis: it has been proved also very useful in certain cases of ordinary neuralgia.

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**BARTELS ON THE THERAPEUTIC VALUE OF SALICYLIC ACID.**—Professor Bartels (*Deutsche Medic. Wochenschrift*, No. 32-35) states that salicylate of soda acts as powerfully as salicylic acid, although containing only 0·68 of the free acid; that no deep seated lesions of the intestinal mucous membrane occur even after large doses; but that eruptions and loss of appetite frequently occur in non-feverish patients after the use of the free acid.

The action of salicylic acid is twofold, antipyretic and specific. The antipyretic action may be observed in any febrile patient. In the hectic fever of phthisis it has been given with varying results. In some cases the action was slight or the drug was not well borne, whilst in others it was given for months, producing cessation of the daily rise of temperature, with wonderful restoration of strength and of weight. In typhoid

fever, the nerve-symptoms became so severe during its administration that it was discontinued. In other fevers it was found to be much less powerful in its action than quinine. Diminution in the frequency of the pulse, profuse sweating, dryness of the mouth, and slight albuminuria, also result from its employment. In diabetic patients, large doses produced severe nervous symptoms; staggering as in intoxication, delirium, and even maniacal violence. These bad effects often restrict the use of the salicylic preparations to small doses, thus decreasing its value as an antipyretic.

Dr. Bartels has employed salicylic acid as a specific in acute rheumatism and in diabetes mellitus, with great success. In the former there was a steady fall of temperature, with remission of the symptoms, and in a few days convalescence; good results were obtained also in chronic rheumatic arthritis. In diabetes mellitus large doses were given, which brought on brain-symptoms, but there was great reduction in the amount of sugar in the urine, and increase in the weight of the body. He concludes that the salicylate of soda has no prophylactic action against infectious diseases, for a diabetic patient, whilst taking large doses of this drug, was seized with erysipelas and died.

**WOOD ON SALICYLIC ACID IN HAY-FEVER.**—Mr. W. J. H. Wood (*British Medical Journal*, July 1878, p. 101) confirms Professor Binz's statements concerning the value of this agent. Mr. Wood uses the pure acid in snuff, the patient inhaling ten to fifteen grains a day. Binz employs a solution of one part to 1000 parts of water thrown into the nostrils (*Deutsche Med. Woch.*, September 22, 1877).

**JOLLY ON CHANGES IN CALOMEL.**—MM. Mialhe and Laroque have demonstrated that calomel may give rise in the organism to bichloride of mercury under the influence of the alkaline chlorides of the economy. Polk has recently pointed out the fact that phenomena of poisoning may arise after the administration of an old mixture of calomel and sugar, or of calomel and magnesia. M. Jolly has taken up again (*Gazette Médicale de Paris*, 9 Nov. 1878) these important therapeutical questions, and has arrived at the following conclusion.—The alkalies, their carbonates and the earthy bases, transform calomel into corrosive sublimated with more or less activity. White and refined sugars have no action on the mercurial salts. Rough sugars are often acid (colonial sugar) or alkaline (beet-root sugar), on account of the small quantity of hydrate of lime which they contain; it is to the impurity of the sugar and to their action on the calomel that we must impute the phenomena of poisoning observed by Polk. The practical conclusion of M. Jolly's study is, that when calomel is employed internally, we must avoid associating its salts with acids, alkalies, chlorides, and raw sugar.

**LOUVET-LAMARE ON THE THERAPEUTIC EFFECTS OF BRYONY; DROSERA; GELSEMIUM SEMPERVIRENS; AND CAYEYONA GLOBULOSA.**—Dr. Louvet-Lamare has published in the *Année Médicale de Caen* (June 1878), some interesting observations on the effects of bryony and drosera in whooping-cough. In the first stage of the disease he administers tincture of bryony, in daily doses of fifteen minims, to children aged seven years; and states that it very quickly diminishes the bronchitis, stimulates the appetite, and does not create nausea. This plant seems to possess astringent properties, as is shown in the remark made by Barbier in his *Materia Medica*, vol.



iii, where he says that the peasant women are in the habit of taking, during some days, enemata made with the roots of bryony, when they cease to nurse their babies, and wish to prevent the secretion of milk in the mammae.

Drosera has proved very efficient when whooping-cough has reached the paroxysmal stage. It was also employed formerly against dropsy and diseases of the lungs, and is said to have been used with apparent success in phthisis.

Gelsemium sempervirens is a very powerful sedative in cases of neuralgia, especially if the latter be not complicated by local congestions. It is very efficient in neuralgia of the upper parts of the body, but loses some of its power in the lower parts of the latter. *E.g.*, neuralgia of the face and the teeth are speedily removed by it; then follow, classed as to the power of resisting the power of the drug, neuralgia of the brachial plexus, of the intercostal, ilio-lumbar, crural, and ischiatic nerves. It has also been used with great success in hemiplegia. Gelsemium is dispensed in pills or in the form of a tincture, the dose of which varies from fifteen drops a day to ninety drops. The effects of this drug must be carefully watched, because it is apt, especially if taken in too large quantities, to produce symptoms of poisoning, which first show themselves in the eyes. The patients complain of giddiness, their upper eyelids have an irresistible tendency to drop, and when lifted up with the finger the objects appear double; at the same time, a strong sensation of weakness and pricking is felt in the arms. A subcutaneous injection of morphia has, however, always proved a good antidote and removed the alarming symptoms.

The cayopona globulosa is found in Brazil. It is a very powerful drastic, and much used in veterinary medicine. An alkaloid, cayaponine, has been extracted from it, which contains the efficient parts of the plant. Experiments have been made with this substance in the form of a solution; if swallowed, it produced very copious and repeated evacuations, but without any pain in the bowels. When injected under the skin it caused a very large and painful swelling, which was surrounded by a network of smaller swellings, radiating from the centre, and apparently produced by some irritation of the lymphatic vessels. There was not the least trace of any drastic effect in this case.

RENNARD ON VAGINAL SUPPOSITORIES.—M. E. Rennard (*Pharmaceutische Zeitschrift für Russland*, Nos. 14-15) says that these are mostly prepared by melting together the required ingredients and pouring them into suitable forms, in order to let the mass solidify. A very good vehicle is a mixture of water, gelatin, and glycerin, which will, however, only retain its transparency if the water be all evaporated off. The proportion is one part of gelatin to six of glycerin, which may require modification according to the concentration of the glycerin, the weather, or the other ingredients. Almost all substances may be incorporated with this mass, without undergoing alteration; only tannin enters into an insoluble compound with gelatin.

An admirable substitute for the latter is agar-agar. This is a species of gelatin prepared in Japan from various algæ, chiefly *Fucus Amansii*, which is free from nitrogen, occurs in the market in quill-shaped shreds, and is used exactly like animal gelatin. It absorbs a very large quantity of water, one part of it still yielding a tolerably solid jelly with 60-70 parts of

water. According to Professor E. Reichardt, of Jena, agar-agar consists of parabin, a carbohydrate, which is also valuable as a nutriment. It dissolves in boiling water, and yields arabic acid after sufficient digestion with alkali.

To prepare vaginal suppositories, a jelly is made from one part of agar-agar and thirty of water. This, however, has a turbid milky look. If it be desired transparent, the mixture should contain one part of agar-agar, ten parts of glycerin, and twenty parts of water. The agar-agar is allowed to soak in water over night, of which it takes up about twenty parts; it is then heated until liquid, and the glycerin added. With glycerin alone it forms no jelly, but a tough transparent mass. Any desired quantity of tannin may be added to the jelly, without being rendered insoluble.

MOSLER ON THE LOCAL TREATMENT OF MENINGITIS.—Dr. Mosler (*Deutsche Medicinische Wochenschrift*, 1878, No. 23, 24, and *Centralblatt für die Medicinischen Wissenschaften*, Nov. 23) describes the case of a young man aged 27, who had for six weeks been suffering from a very severe attack of articular rheumatism. In the seventh week the pain and swelling had abated in the joints, but the patient showed symptoms of cerebral meningitis combined with constant fever. Blisters were immediately applied to the crown of the head, which had been previously shaven, and behind the ears; the dangerous symptoms soon disappeared and the patient's health was rapidly restored. The author explains the effect of the blisters from the fact, which has been proved by experiments, that the volume of blood contained in the brain is greatly lessened by irritants applied to the skin.

LAZANSKY ON THE THERAPEUTIC EFFECTS OF IODINE CONTAINED IN HUMAN MILK.—Dr. Lazansky (*Vierteljahrsschrift für Derm. und Syph.*, Band v) has lately made experiments on the effects of human milk which contained iodine. One gramme of iodide of potassium was administered daily to a syphilitic woman who was nursing a baby, aged five months, suffering from the same disease. The iodine could be traced in the mother's milk and urine on the same day, but only on the next morning in the baby's urine. The effect on both mother and child was remarkably good. Iodine does not in the least affect the secretion of milk.

JARISCH ON PYROGALLIC ACID IN PSORIASIS.—Dr. A. Jarisch (*Pharmaceutische Post*) reports his complete success in the treatment of psoriasis by pyrogallic acid. At first he used an ointment, containing 20 per cent. of pyrogallic acid; this was, however, found to produce excoriations. Hence he has reduced the ointment, as ordinarily used, to the strength of 10 per cent., and in some cases he uses it only of 5 per cent. If spread on muslin, and then applied, it must be still further diluted, otherwise it acts as an irritant. Aqueous solutions should contain about 1 per cent. Pyrogallic acid acts not as rapidly as chrysophanic acid, but it is equally certain in its results.

CHADZYNSKI ON THE USE OF PILOCARPIN IN PROCURING ABORTION.—Dr. Chadzynski (*Przegląd Lekarski*, No. 25, 1878, and *Allgem. Medicin. Central-Zeitung*) states that he had witnessed very favourable results by treating skin-diseases, such as psoriasis, syphilis, etc., with hypodermic injections of pilocarpin. In one of these cases, the patient, a syphilitic girl aged 21, was in the fourth month of her pregnancy.

After the ninth injection had been made labour suddenly began, and the fœtus was born.

Three other similar cases have already been observed. It would, therefore, be highly instructive to submit this particular effect of the drug to careful study, as it may prove very useful in cases where premature confinement is indicated. Great care, should however, be observed in administering subcutaneous injections of pilocarpinum to pregnant women.

**STROGNOWSKI ON THE USE OF PILOCARPIN IN ECLAMPSIA.**—Dr. Strognowski (*Centralblatt für Gynäkol.*, 1878, No. 20, and *Medicinisch-Chirurgische Rundschau*) after having tried in vain to calm an eclamptic patient by a hypodermic injection of morphia, resolved to try some other method. He accordingly injected a syringe-full of a 2 per cent. solution of pilocarpine. Two minutes later the usual symptoms, profuse perspiration and salivation, had begun; the patient grew calm and fell asleep; and after three hours labour-pains began. A second injection was then made, five hours after the first. The child was extracted with the forceps. The mother was perfectly cured of the disease. The quantity of albumen in the urine, which had at first been very considerable, disappeared within eight days.

**ROKITANSKY ON THE USE OF CHLORAL IN DIPHTHERIA.**—Dr. Rokitansky (*Medicinisch-Chirurgische Rundschau*, Nov. 1878) has used a 50 per cent. solution of chloral in three cases of diphtheria which had resisted the usual remedies, such as salicylic acid, carbolic acid, etc., and every time with the same results. The solution was applied every half hour with a camel's hair brush, and caused very little pain, except in one case where the tongue was thickly covered with a layer of diphtheritic matter; here a very considerable secretion of saliva was always observed immediately after the application, and the pain ceased entirely after a few moments. In the other two patients, in whom both tonsils were partly covered with the diphtheritic membrane, the pain was insignificant.

After the solution had been applied three times, *i.e.*, one hour and a half after the first application, large pieces of the membrane could be easily removed with the brush. The underlying portion of the mucous membrane was red and covered with fine granulations. As soon as the normal tissue could be seen, weaker solutions of chloral were gradually used during a week, at the end of which the patients had entirely recovered.

**DELLENBAUGH ON PICRATE OF AMMONIUM.**—Dr. Z. T. Dellenbaugh, writing to the *Philadelphia Medical Times*, recommends the use of picrate of ammonium in whooping cough. He gives the following formula :—

Picrate of ammonia, 1 grain; muriate of ammonia, 26 grains; powdered extract of liquorice, 1 drachm; water, 3 ounces. Of this mixture a teaspoonful every three hours is given to a child under six months, doubling the dose for children one or two years old, and three teaspoonfuls for three to five years.

**MARTIN ON BATIATOR ROOT: A SUBSTITUTE FOR IPECACUANHA.**—M. Stanislas Martin (*L'Union Pharmaceutique*, No. 8) gives a description of this root, which is derived from a plant growing in Senegal. Seeds of it have been planted in the Museum of Natural History at Paris, from which the plant will hereafter be determined. The root is identical in its effects with ipecacuanha in the same doses.

**DRACONTIUM FETIDUM.**—The *Boston Medical and Surgical Journal* reports the successful use of an American drug in cholera. The drug is the root of dracontium fetidum, or, as it is more commonly called, "skunk cabbage". Like most of the plants of this family, its active principle appears to be volatile, and the tincture should therefore be made directly from the fresh root, not dried, collected in the autumn when it is most active. The dose of the "saturated" tincture that has been prescribed is 90 drops, three times daily.

## OBSTETRICS AND GYNÆCOLOGY.

**ENGELMANN ON HYSTERO-PSYCHOSIS.**—In a reprint from the *St. Louis Clinical Record*, Dr. George J. Engelmann describes a case of epilepsy dependent on erosions of the cervix uteri. Mrs. O., aged 28, had borne two children. A few weeks after her last confinement she began to suffer from attacks of shortness of breath and an oppression of the chest; these would pass away in the course of five or ten minutes. The attacks increased in frequency and severity; spasmodic closing of the hands, convulsive movements of the arms, and opisthotonos followed. The contraction of the dorsal muscles was sometimes so powerful, that the patient hurled herself from the middle of the bed on to the floor by a single effort. On examination of the vagina, the cervix was found enlarged and congested with extensive erosions. The eroded cervix was treated with nitric acid, warm poultices were applied to the abdomen, and three times a day vaginal injections containing flax-seed and opium were used. With the exception of a slight spasm on the evening of the same day, the epileptic attacks did not recur until four days after. Five days later Dr. Engelmann made an examination, and found a retroverted gravid uterus. He replaced the uterus, and moved a sound freely about in the cavity. As the patient had a severe attack on the next day, Dr. Engelmann introduced a tent, which was followed by the expulsion of a healthy ovum five days later. The epileptic attacks only appeared twice after the application of the nitric acid to the eroded cervix. Dr. Engelmann remarks that epilepsy was cured by an application of nitric acid to an eroded cervix. Dr. Engelmann draws attention to those unfortunates who have been thrust into insane asylums to end as wretched beings deprived of reason, a life which might have been of utility and happiness, had the uterine disease, the primary cause of the mental derangement, been recognised and treated in time.

FANCOURT BARNES, M.D.

**KEITH ON ANTISEPTIC OVARIOTOMY.**—Dr. T. Keith, in the *British Medical Journal*, October 1878, p. 590, enters fully into the results obtained in forty-nine ovariectomy operations performed antiseptically, which are such as will for ever prevent him again operating without this additional safeguard. In Dr. Keith's first hundred operations, before employing antiseptics, seventeen deaths occurred; and these, year by year, decreased, until in the twenty-six cases immediately preceding the use of the spray, only one death occurred and that was a malignant tumour. Of ninety-four cases, operated upon in the five years before the spray, nine died. Much of Dr. Keith's success he attributes to the use of glass drainage-tubes, and to the use of the cautery in dividing the



follicle, as proposed and practised by Mr. Baker Brown; and he greatly marvels that the lessons taught by Baker Brown's results have been systematically ignored by London operators. Of the forty-nine operations performed antiseptically, two of the first eight died, the rest, forty-one in number, all recovered. The spray is neither troublesome nor inconvenient. Dr. Keith uses Gardner's largest size, which has a double jet and carries the spray eight or nine feet, it reaching the wound as fine as a London fog.

Antiseptic ovariectomy lessens the mortality; encourages earlier operation; does away, to a great extent, with the drainage-tube; hastens convalescence, and proves a great comfort to the operator, doing away with the worry and anxiety to have everything and everybody around and connected with the patient chemically pure and clean. Now, with a 5 per cent. solution of carbolic acid and a nail-brush, with, perhaps, a first wash in turpentine to remove fatty matters from the hands, Dr. Keith feels himself safe to perform the operation half an hour after having his hands in any degree of putridity. With the aid of the microscope healthy and malignant ovarian structure, simple ovarian and peritoneal fluids, as well as those of the uterine fibro-cysts, can now be recognised with certainty.

NUSSBAUM ON ANTISEPTIC OVIOTOMY.—Dr. J. A. von Nussbaum, in a paper published in the *British Medical Journal*, October 1878, p. 617, also gives his experience of ovariectomy under Listerism. His first six operations all terminated fatally. Subsequently he lost half his cases; after using drainage, as done by Spencer Wells, mortality diminished; since he has used Lister's method not one of his patients has died from septicæmia. Among the dangers and accidents arising during the operation, the well-known case, where Dr. Nussbaum restored the right ureter, part of which had been cut away, is recorded; also a very amusing case of a lady who gave a ball in honour of her restoration to health after ovariectomy, and who had to retire and extract a forgotten drainage-tube, and returned to finish her dance.

COPEMAN ON THE TREATMENT OF SEVERE VOMITING IN PREGNANCY.—Dr. Edward Copeman brings forward (*British Medical Journal*, September 1878, p. 460) other cases supporting those already published in the *Journal*, May 1875, p. 537, when, it will be remembered, he advocated dilating the mouth of the womb in those cases where ordinary remedial means failed to arrest vomiting. In case 1, a lady, three months pregnant, vomited after everything she ingested. After a fair trial of the usual means, the first joint of the fore-finger was introduced into the os uteri, when all feeling of nausea suddenly disappeared, and no vomiting recurred. Five cases in all are reported, each confirming the value of the treatment Dr. Copeman has found so very valuable—viz., dilatation of the os uteri (*Vide London Medical Record*, February 1878, p. 84).

GRIFFITH ON PERITONEAL ADHESIONS OF THE GRAVID UTERUS AS A CAUSE OF POST PARTUM HÆMORRHAGE.—In May 1862, Dr. Graily Hewitt described a case under this heading which is published in the *Obstetrical Transactions*, vol. xi, p. 108. A *post mortem* examination showed a number of tough fibrinous bands or strings, that had connected the fundus uteri with the abdominal parietes or viscera, and which were torn through when the hand followed the child during expulsion. In cases where

these adhesions exist from inflammatory action during gestation, high up and preventing the uterus from contracting and expelling the placenta, hæmorrhage, of an alarming character, is apt to arise. In confirmation of Dr. Hewitt's observations, Mr. G. de Gorroquer Griffith, in the *British Medical Journal*, September 1878, p. 465, brings forward the case of Mrs. B.—, aged 37, who was seen in the eighth month of her fourth pregnancy, the three previous labours necessitating the use of forceps on account of circular narrowing of the pelvis. Premature labour was induced by Mr. Griffith, and again forceps had to be used, but there seemed to be no attempt at uterine contractions to expel the after-birth. On introducing the hand the fundus uteri was found high up, and a sensation of jerking movements felt, as though the uterus was endeavouring to contract from fundus to os, but was held fast above. With one hand externally pressure was made upon the fundus downwards, so as to tear all adhesions at the upper and posterior parts of the fundus, which at last succeeded in securing efficient contraction, and the patient convalesced satisfactorily.

ROUTH ON THE TREATMENT OF SPECIAL FORMS OF UTERINE FLEXION NOT REMEDIABLE BY ORDINARY MEASURES.—In a paper read at the annual meeting of the British Medical Association by Dr. C. H. F. Routh, and published in the *British Medical Journal*, September 1878, p. 463, the vexed question of the value and safety of intra-uterine stem-pessaries is fully and practically discussed, and cases of cure, or of marked relief, are brought forward to justify their more general use. A perplexing case of what Dr. Routh terms a ball-and-socket version, compelled him to resort to various devices, and at last he succeeded in attaching a stem to a Hodge's pessary, three forms of which are made by Mr. Russell, 57, George Street, Portman Square, and by these instruments many obstinate cases of version are capable of permanent relief.

MORGAN ON A NEW TRACTOR FOR FORCEPS.—Mr. H. M. Morgan has invented an ingenious substitute for M. Tarnier's tractors, which may be applied to any ordinary long curved forceps. A diagram (*British Medical Journal*, June 1878, p. 934) explains their mode of application, the tractor being merely hooked on to the forceps when *in situ*.

RICHARD NEALE, M.D.

WALTON ON STERILITY.—Dr. Walton, at a meeting of the Ghent Medical Society (*Annales de la Société de Méd. de Gand.*), read notes of a very interesting case of sterility. It was that of a woman who had been sterile for seven years, having many symptoms of chronic inflammation of the neck and body of the uterus, with very marked anæmia. This latter symptom was treated with iron for a long time, but when the case came under Dr. Walton's care, he assigned it to its true cause. On examination by speculum his suspicions were confirmed, and the patient was cured in two months by means of exclusively local treatment. This consisted chiefly of cauterisation with nitrate of silver, and applications of glycerine and tannin. The woman shortly afterwards became pregnant, and was confined of a fine healthy child at full term.

## TOXICOLOGY.

POISONING OF A NEW-BORN CHILD WITH NUX VOMICA.—Cases of infanticide by poisoning are very rare. The following is reported in the *Vierteljahrsschrift für gerichtl. Medicin.*, Vol. xxv. Children destroyed within a week of birth generally die from some form of violence which ensures rapid death. A girl was secretly delivered of a child on the night of the 16-17th October. She concealed the child, and suckled it for one or two days. On the evening of the 18th October she gave it some camomile tea, into which she had put a teaspoonful of powdered nux vomica. The child had convulsions and died in two hours. The body, which had been thrown into a ditch, was found and submitted to medical examination on the 21st October. It was a mature child and well formed. Although three days had elapsed since death, cadaveric rigidity was very strongly developed in it. Around the navel there was a red circle with a commencement of suppuration. The stomach contained a teaspoonful of a mucilaginous liquid; in the small intestines chymous matter was found, and the large intestines were distended with faecal matter. The viscera of the chest presented the characters of asphyxia. There was no question here of the proofs of live birth. The experts who made the examination came to the conclusion that the child was mature, viable (*i.e.*, had a capacity to live), that it had completely and fully breathed and had died of asphyxia, not before the second day after birth. At this time the mother was unknown, but suspicion fell upon the girl; it was proved that she had been recently delivered, and a box containing nux vomica in powder was found in her possession. A chemical examination of the stomach, intestines, and liver was made, but although that process was employed, not the least trace of strychnia could be detected in the body. There was no doubt, however, that the child had died from strychnia poisoning. The girl confessed the crime.

[This case is worthy of note. 1. From so young a subject being destroyed by poison. 2. Although the child died in two hours, during which time the absorption and diffusion of strychnia would take place, not a particle of this poison could be found in the body; thus furnishing an additional proof that alkaloidal poisons may destroy life and leave no trace of their presence in the body. 3. The case further confirms what has been observed in some other cases, namely, that in strychnia poisoning, cadaveric rigidity in the muscles is often well marked and continues for a long time. This is one of the results of great muscular exhaustion.—*Rep.*]

ALFRED S. TAYLOR, M.D.

## REVIEWS.

*Litholapaxy, or Rapid Lithotritry with Evacuation.*

By HENRY J. BIGELOW, M.D., Professor of Surgery in Harvard University; Surgeon to the Massachusetts General Hospital. London: J. & A. CHURCHILL. 1878.

Lithotritry, with rapid evacuation of the fragments of the crushed calculus, has been designated by Dr. Bigelow "Litholapaxy", an operation which usually takes over an hour to thoroughly perform. Lithotritry is considered by this authority to be in a general way a safe and simple operation, yet a fatal

termination in some instances arises. "If at the first operation the bladder could have been completely disembarrassed of every particle of stone, even with the risk of irritating its lining membrane, we can hardly doubt that the relief would then have been followed by comparatively ready repair"; for this reason, "the future of lithotritry lies in the direction of a fast working lithotrite, which, while it effectually protects the bladder, is more powerful than the usual instrument and better proportioned to the work it is to do—a rapid comminution of the stone—its immediate and complete evacuation by means of a large tube with an efficient orifice". The lithotrite now generally used is apt to become clogged with *débris*; and its withdrawal in a loaded condition is sometimes attended with injury to the neck of the bladder. Dr. Bigelow has therefore introduced an instrument with some modifications of the existing one.

1. The lock is so arranged that it can be closed by rotation of the right wrist, without displacement of the fingers of either hand.

2. A ball has been substituted for the wheel, in order to meet the requirements of the stronger blades.

3. A tube is contained between the blades, through which water can be injected into the bladder. In practice this has been found to be too small to render any actual service, so it has been discarded.

4. The blades of the instrument differ from the ordinary lithotrite, the female one being longer and wider in the shoe, which is non-fenestrated, merely having a "slot" in the heel, with low sides so as to be easily accessible to fragments. It being at the heel, where the calculus is generally comminuted and the clogging of the *débris* greatest, "the floor is high and discharges itself laterally". The male blade of this lithotrite is provided with alternate triangular notches, so again favouring the escape of detritus.

The subject having been etherised, eight to ten ounces of water are injected into the bladder, and the calculus is comminuted as much as possible with the above described lithotrite; this having been withdrawn, the evacuating tube is introduced. This consists of a large straight catheter with an uniform calibre throughout. Dr. Bigelow's instruments are made of thin silver, of sizes 27, 28, 29, 30, 31 (Charrière). The internal orifice should be oval with thickened and rounded edges, giving the extremity of the tube an unguiform appearance. In passing this instrument into the bladder, on reaching the triangular ligament it may be "advantageously rotated through the aperture like a cork-screw". The upper extremity of the catheter is attached to an elastic bulb or bottle by means of an India-rubber tube from six inches to two feet long, and provided with a small glass trap, with wire gauze or a perforated tube to strain the water on its return from the bladder. The exhausting bottle or bulb should have a ten-ounce capacity, and should be fitted below with a glass chamber for the reception of the gravitating fragments of the stone. For manipulation, "the best position is at the right hand of the patient, resting the left wrist on the pubes to steady the tube, while the bulb is supported in a stand on the table between the thighs; the surgeon, sitting between the supported feet of the patient, compresses the bulb with the right hand, using the left alternately to hold the glass and to adjust the silver tube". At first, the fragments being numerous, the compression and expansion of the exhauster may take place quickly, the object being to separate and float the pieces of the stone so that as they fall they may enter the tube singly without obstructing it; later on, however,



when the fragments are fewer in number, a second or more must be allowed for them to gather in the indented portion of the floor of the bladder made by the instrument, as very slight injection shoots the *débris* to every part of the viscus. A dozen aspirations are sufficient to clear out all the passable fragments; any left will require recrushing with the lithotrite, and a repetition of the process. The evacuation of the pieces of the calculus, we are told, requires considerable dexterity; this may be attained by practising with a portion of an ox-bladder suspended in a large mouthed vessel nearly filled with water. Coal may be used to represent calculi. The evacuating apparatus is apt to become blocked; sometimes injecting water from the bulb is sufficient to clear the passage; if not, it is necessary to pass a rod down into the bladder; the orifice of the catheter is the point most frequently obstructed. The operation is undoubtedly long, but much time is consumed in ascertaining whether the stone is altogether evacuated.

Sixteen patients have been subjected to this plan of treatment. Eleven of these cases are published in the present work; only one subject was below fifty years of age, but none of the stones were composed of oxalate of lime. One fatality resulted, this being a man aged 66. Death took place on the sixth day, with no very prominent symptoms. A necropsy could not be obtained. To facilitate the description of the various instruments and the method of employing them, illustrations are employed. Plaster casts of distended bladders with contained instruments are figured, in order "to show the effect of a slight pressure in indenting the floor of the bladder". A letter to the *New York Medical Record*, from Dr. Bigelow, answering some adverse criticisms, and a summary of the chief points in connection with the operation, complete the book.

The author's name is a sufficient guarantee that much material for thoughtful consideration by all who wish for advancement in an important department of surgery, is contained in the pages of this work.

T. F. CHAVASSE, M.D.

*Du Mercure: Action Physiologique et Thérapeutique.*  
Par le Dr. H. HALLOPEAN. Pp. 270. Baillière.  
Paris, 1878.

This brochure is carefully compiled and well arranged to present a *coup d'œil* of its subject: it contains also some new observations which are of interest, but it rather avoids some points of importance; it does not offer any fresh material towards judging the action of mercury in inflammation, whilst the remarks as to its action on the liver are rather old than otherwise.

Physiological action is defined as that exerted on the "living organism"—not simply on the healthy, and this because, as Claude Bernard says, there is no radical difference in nature between physiological, pathological, and therapeutical phenomena. This view commends itself, and is really the foundation of our hoping to get practical knowledge from experiments on animals; yet it is not always recognised. Passing over a good historical summary we find that under "absorption" the observations of Fleischner are held conclusive, that metallic mercury during friction penetrates the epidermis, but not deeper; in such cases absorption is partly by the lungs, yet not wholly, for a patient breathed by a mask external air only during a friction on the arm; the limb was afterwards

swathed in wool and waterproof for sixty hours, and during that time mercury was detected in the urine. To show its influence by the lung, we have the case of a wife salivated after being in a small room when her husband used a friction, and the delicate experiments of Merget, with iridium as a test, proved that the metal volatilised at all temperatures. Taken internally, it is absorbed, probably, as an albuminate of mercurial oxide united with sodium chloride. It accumulates mostly in the kidney and the liver, and it is eliminated by their secretion, as well as by the saliva, the milk, and the sweat. The latest researches on these points are quoted. Local effects of mercurial applications are most considered. The general action is thus treated of under the headings of "slight and severe mercurialism", acute and chronic. A careful account is given of the results of Wilbouchewitz, who found the number of blood-corpuscles increased up to a certain point, by mercurial treatment (in syphilitics), and of Keyes, who found it increased by small doses in all subjects; an excess of mercury of course diminished them, but the augmentation, under any circumstances, is an important fact.

Referring to its influence on nutrition, the author quotes some recent observations of M. Couty on the urine of twelve syphilitic patients treated by mercury. He could find no definite influence existed either upon its quantity or the amount of urea.

Concerning the action of mercury on the liver, we have simply an abstract of Professor Fraser's paper of 1871, in which he stated the four main opinions on the subject, and concluded in favour of a positive cholagogue effect. The paper is an excellent one; but still, from a writer in 1878, we might expect some notice of Röhrig and Rutherford; the observations of the latter, to the effect that corrosive sublimate stimulates the liver when calomel does not, deserve special notice. In the therapeutical section, "action in hepatitis", Annesley is taken as still representing English practice, with his heroic doses of calomel. There is no notice of Morehead, Waring, Maclean, Massy, or others, who practically "changed all that". An interesting case of scarlatiniform rash, occurring several times after the use of minute doses of mercury, is recorded for the first time; also two cases of *post mortem* examination of the kidney in salivated patients; in these, calcareous deposits were found in the Malpighian corpuscles, very interesting by the side of Salkowsky's similar results in rabbits.

The chronic form of mercurialism is dependent almost always on habitual working with the drug; nervous symptoms of importance are almost wholly confined to this form. Mercurial tremor is described and compared with that of lead and alcoholism; their pathology is probably a chronic inflammation and fatty degeneration of the nerve-centres or peripheral nerves. Tremor may sometimes be the sole symptom of the chronic form of poisoning; it ceases during drunkenness (Fourcroy). Convulsive phenomena are an exaggeration of it; no true epilepsy is to be attributed to mercury. Cases of hemiplegia are given, one of them temporary in character; and various forms of altered sensation are well illustrated. Atrophy of muscles has been verified. Finally, the antiparasitic powers of mercury are described, and the influence of sublimate locally applied in arresting development of the vacine virus (Chauveau).

The teaching as to mercury in inflammation is uncertain. It is said that Trousseau went too far when he called it "the most powerful of antiphlogistics".

Yet the author will not deny such action, only "it is not certain". Perhaps this attitude of mental "reserve" must follow from reading so many opposite views; and yet Todd and Gull, Habershon and Maclean, have given no uncertain sound in denying all therapeutic value to mercury in inflammatory diseases, now many years ago. It is probably now the general opinion with us; and yet, rather inconsistently we many of us fall back on mercury in some special form of inflammation—one in meningitis, another in laryngitis, another in peritonitis. Yet the verdict must go against mercury on the evidence. But as to its value in syphilis our author is very clear—it is of the utmost value, yet not always curative "la petite insurrection dont Hermann, Anzias-Turenne, et Bœck avaient été les fauteurs est à peu près éteinte; on ne discute plus . . . l'antimercurelisme a vécu! l'antimercurelisme est mort!"

A long and good account of hypodermic administration is given, and its advantages pointed out, counterbalanced though largely by local ill-effects. Sufficient credit is not given, we think, to Mr. Cullingworth's formula with the cyanide (*Lancet*, 1874); the chloro-albuminous solutions and the peptonates are well reported of. The work concludes with a copious formulary and a bibliography, which says much for the industry and research of the author; it would, however, be more available if managed differently, and we have failed several times to find mention of authors referred to in the text.

E. MACKEY, M.D.

*Clinical Lectures on Stricture of the Urethra and the Disorders of the Urinary Organs.* By REGINALD HARRISON, F.R.C.S. London: J. and A. Churchill. Liverpool: Adam Holden. 1878.

The eighteen lectures delivered at the Liverpool Royal Infirmary compose this book, which, we are informed by the author in his preface, is published in its present concise form "for the purpose of expressing my own views and criticising those of others, upon points of practice which are still open to discussion and consideration". In the first lecture, the causes and the positions of strictures, and the use of the endoscope, as an aid to diagnosis and treatment, are considered. The classification adopted by Professor Leopold Dittel in his work (*Die Stricturen der Harnrohre*) is recommended as one useful for reference. In Lecture No. 2, the anatomical points of interest with reference to the urethra are set forth. In the third lecture, the symptoms and consequences of stricture are shortly enunciated, and the dilatation of the urethra behind its strictured point is considered, more especially with regard to Jordan's operation. The next eight lectures are occupied, more or less, with the important question of the various kinds of treatment of stricture, and its complications, at present in vogue. Mr. Harrison thinks highly of the plan of continuous dilatation: "Its results appear to me to be of a more lasting character than any other I at present know." For gradual dilatation the English bougie, No. 12, is not thought to sufficiently stretch the urethra; three or four sizes above this should be employed. The subject of external urethrotomy is fully discussed, and Mr. Wheelhouse's operation is quoted *in extenso*, as this last proceeding is usually considered only very meagrely in the different text-books. The internal division of strictures is stated to be most applicable to those resident forms which are painful to stretch,

and are speedy in their subsequent contraction. Of the various urethrotomes now in existence, that of P. H. Watson is spoken of as the best. Latterly, however, Mr. Harrison has invented an instrument of his own, wherewith both the upper and lower walls of the canal are divided at the constricted point. Oval-shaped bougies are employed after the operation, so that dilatation is maintained, more especially in a lateral direction. At present, this plan has given every reason for satisfaction. The twelfth lecture is devoted to foreign bodies in the urethra and bladder, and the use of the lithotrite as an extractor. Hypertrophy of the prostate gland, its results and treatment, occupy the next chapter. The remaining lectures are set apart for the consideration of bladder-affections; the various diseases of this organ are fully discussed. A brief record of cases that have occurred in the author's own practice, illustrative of the subject under consideration, are interspersed throughout the lectures. Numerous explanatory plates also enhance the value of the work. To all those interested in the study of genito-urinary diseases, from a surgical point of view, this book will prove of service, and its perusal will be found enjoyable, owing to the facility that Mr. Harrison possesses of expressing himself readily and fluently.

T. F. CHAVASSE, M.D.

*Etude sur les Alkalins: De leur action Physiologique sur les Phénomènes de Nutrition et de leur Application Thérapeutique.* Par Le Dr. LÉONCE SOULIGOUX, pp. 399. Paris 1878.

The first part of this work treats of the physiological actions of alkalies on the function of nutrition. The author enters at considerable length into the normal composition of all the chief liquids of the body, and points out how important a part alkalies play in their formation. He then discusses the pathological composition of the liquids of the animal economy, and shows that in many there is a diminution of the normal alkalinity. It is stated that the alkalies have a great influence on animal electricity, playing an important part in the production of the nervo-electric current. Their actions on respiration, circulation, nutrition, are described, and all the details are discussed at considerable length.

The second part of the work is a consideration of the therapeutical applications of alkalies, and more particularly the bicarbonate of soda and the waters of Vichy. The author enters at length on the employment of these agents in the treatment of dyspepsia, affections of the liver, the urinary diathesis, gout, calculi, diabetes, anæmia, etc. To the therapist, and those interested in natural waters, this book will present many features of instruction.

A. HUGHES BENNETT, M.D.

*On the Traumatic Lesions of the Female during Artificial Labour.* Thesis by Dr. PIERRE BUDIN (*Des Lésions Traumatiques chez la Femme dans les Accouchements Artificiels*).

This admirable monograph of 171 pages was the thesis sustained by Dr. Budin at the "*concours pour l'agrégation*". It treats systematically of the lesions which may occur to the mother in induced labour: 1. Lesions of the vulva and perinæum; 2. Lesions of the vagina; 3. Lesions of the uterus; 4. Lesions of the tissues or organs situated in the neighbourhood of the genital canal; finally, the author



describes lesions of the hard parts, including—1. Lesions of the articulations; 2. Lesions of bony structures. The whole of the above subjects are illustrated by authentic cases culled from German, French, and English authors. Such theses as these, combining as they do scholarly work with scientific research, do honour to the university which produces them, and at the same time form a valuable series of trustworthy works of reference.

FANCOURT BARNES, M.D.

## NEW INVENTIONS.

### BARNES' IMPERMEABLE OPIUM POULTICE.

Mr. J. B. Barnes, pharmaceutical chemist, of Trevor Terrace, Kensington Road, has introduced a very clean, neat, and effective method of administering opium through the skin. By this convenient and effective tissue, which has a soluble opiate on its deep surface, and is backed by water-proof tissue, the opium is sweated into the system locally. That is an excellent method of obtaining local absorption, if efficiently employed. No one who has ever introduced iodine in this way will ever willingly resort to other methods.

### SAVORY AND MOORE'S MEDICATED LAMELS.

The progress of intelligent pharmacy and skilled prescription has received a sensible impulse by the introduction by Savory and Moore, of 143, New Bond Street, of this extremely convenient, exact, and compact form of medicine.

Each sheet of twenty-four squares consists of thin, pliable, and wafer-like gelatine, generally transparent, containing in each square a dose of one or other of a well-selected list of about forty active medicines. These sheets can be carried in an ordinary pocket letter-wallet, and in this way the physician, the traveller, the tourist, or the emigrant, has always at hand an ample supply of the most important medicine, already divided and dispersed in suitable doses, unalterable under reasonable conditions, and capable of being administered in an easy and tasteless manner. For the exactness of the dosage and the precision of the preparation, the reputation of the house and the precautions which are taken in their well-known laboratories by able operators, to employ only the best drugs, sufficiently vouch. Of the singular convenience, efficacy, and practical comfort of such pocket-wallets even during continental tours or country residence, many London physicians (and among them ourselves) can, from the experience of last autumn, fully attest.

## MISCELLANY.

INVISIBLE POSTAL-CARD INK.—Professor Böttcher has lately recommended a mixture of 1 part of sulphuric acid with 50 parts of water. The writing is to be done with a quill, and will be, when dry, entirely colourless and invisible; but on heating carefully over a flame, or by laying on a hot oven, it will appear in deep black characters.

HYDROPATHY.—Charles Lamb's opinion of hydropathy was "It is neither new nor wonderful; for it is as old as the deluge, which, in my opinion, killed more than it cured."

A CENTENARIAN BRIDE.—The Polish journal *Kalischania* reports the following extraordinary incident. In the village of Sompolno, in the department of Kalisch in Russian Poland there lived a Jewish widow named Rajela Wilcznoka, aged 100 years. She lived with her daughter who was herself 80 years of age, and who was great grandmother to a child 16 years old. Notwithstanding her great age the widow Wilcznoka walked alone, had good sight, heard perfectly, and had an active mind. She has lately married a merchant, 88 years of age, living in Kalisch. Touching on this subject it is announced that at the time of the last census there were in Austria 183 men and 229 women who had attained or passed the age of 100 years.—*L'Union Médicale*.

MIQUEL ON MICROSCOPIC GERMS.—M. Miquel states that Ehrenberg and Glanbry first drew attention to the presence of infusorial ova and cryptogamic spores in the air, that it was M. Pasteur who first gave a just idea of the multitude of germs floating around us, and that the majority of recent observers recognise that the air is peopled with microscopic bodies capable of growing and of fructifying where chance sows them, and where the nature of the medium allows of it. M. Miquel deduces the following facts from eighteen months of daily research in this subject. The average number of microscopic germs is small in winter, increases rapidly in spring, remains stationary in summer, and diminishes in autumn. Rain causes an increase in their number which is often surprising; for example, when in summer great heat is followed by a storm, the instrument, which reveals from 5 to 10,000 on the evening before the rain, reveals 100,000 on the morning after it, this increase after rain occurs at all seasons with remarkable constancy. Thus temperature and moisture appear to be the chief causes of variation in the number of micro-germs in the air. The following organisms are most frequently met with. Bacteria are always to be found in rain-water, generally also monads, and sometimes rhizopoda. In the air one finds cryptogamic spores, spores of fungi, pollen, grains of starch, and sometimes large masses of algæ.

FEMALE PHARMACISTS IN HOLLAND.—In 1865 a young lady, Miss Tobbe, applied to the Medical Commission of Holland for permission to obtain her title of pharmaceutical student, for the purpose she wished of making herself useful in her father's apothecary's shop. The Commission replied that the request was so extraordinary that it could not take upon itself the responsibility of replying, and advised the petitioner to apply to the Minister of the Interior. This was done, and the result was a direct refusal. In Article 17 of the instructions for the apothecaries, the pronoun "he" was used; and hence, it was argued, male pupils alone were meant. The law of 1866, concerning the provinces of the healing art, admits women as well as men to be examined as pharmaceutical students, pharmaceutical assistants, and as chemists. In 1868 Miss Tobbe obtained her title of pharmaceutical student. She has had many imitators. Since the new law came into force a hundred ladies have been received as pharmaceutical students. The examination of a pharmaceutical student includes the Dutch language, arithmetic, Latin, reading, and explanation of written prescriptions, as well as some of the prescriptions of the *Dutch Pharmacopœia*; a theoretic knowledge of physics; a common knowledge of remedies by their exterior characteristics; the origin of medicines; their scientific names with their synonyms; and the preparation of prescriptions. The future female druggists, of whom the larger number are the daughters of country medical men or druggists, are not only placed in their father's dispensaries, but are sought after by the druggists of the large towns, especially in Amsterdam, and even for the "Bureau de bienfaisance". They are recommended by their orderly habits and their cleanliness and accuracy.



















